Cities, Crafts & Commerce under the KUSĀNAS

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Kameshwar Prasad

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CITIES, CRAFTS AND COMMERCE
UNDER THE
KUṢĀṆAS

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KAMESHWAR PRASAD

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Dedicated
to
The sacred memory of
My father
Ayodhya Prasad

Foreword

I HAVE great pleasure in commending the book of Dr. Kameshwar Prasad to students of ancient social and economic history. The author presents a balanced, systematic and scholarly account of the urban centres in Kuṣāṇa India and underlines the importance of trade and trade-routes in this context. There is no doubt that urbanism reached its peak under the Kuṣāṇas. Although Kuṣāṇa sites have not received due attention from the archaeologists, nearly 450 explored and excavated sites have been identified in this study. But so far no adequate justice has been done to these settlements, especially towns. This lacuna has been removed by Dr. Prasad's work. Assembling the enormous data found in inscriptions and archaeological reports, it not only locates towns but also accounts for their full-blooded growth under the Kuṣāṇas. The artisanal and commercial dimensions of urbanism are discussed at length and the cause of its decline in post-Kuṣāṇa times analysed. All told the book makes valuable contribution to ancient urban and commercial history. I am confident that it will be of use not only to historians but also to sociologists and geographers.

R. S. SHARMA

Department of History
University of Delhi, Delhi

January 30, 1984

Preface

THE EARLY centuries of the Christian era witnessed the growth and development of the Kuṣāṇa empire, extending from Bihar in India to central Asia. This led to the restoration of political stability in north India after a period of disintegration, increased cultural contact with the west and economic prosperity resulting largely from more established commercial links between Indian and the outside world. The progress in trade and commerce facilitated the growth of towns in Kuṣāṇa times on an unprecedented scale, a fact borne out by archaeological excavation in India, Pakistan and central Asia. The towns played a pivotal role in shaping the socio-economic and cultural history of India. The study of towns, therefore, is a very fascinating subject. It has attracted the attention of historians, archaeologists and sociologists alike in India and abroad. Several Seminars and Symposia have been held to discuss the meaning and nature of urbanization, the origin and growth of towns. Some monographs on ancient Indian towns have also appeared.

One of the earliest works on the subject is C.P.V. Aiyyar's *Town Planning in the Ancient Deccan* (1911) which discusses the lay-out of some of the South Indian towns on the basis of literary evidence. This was followed by B.B. Dutta's *Town Planning in Ancient India* (1925) which follows more or less the same pattern as found in the former work. These early studies were handicapped by the fact that archaeology had not made enough progress when they were undertaken. Their authors had therefore to rely mainly on literary material. Not surprisingly both Aiyyar and Dutta have failed to mark the stages in the growth of ancient towns. The same is also true of Altekar's *A History of Ancient Towns and Cities in Gujrat and Kathiawad* (1926) and his *History of Banaras* (1937). Neither of these works rises above the level of miscellanies containing desperate literary references to towns arranged under different heads. In none of the above mentioned works, due attention has been paid to towns in the Kuṣāṇa period. Altekar's *History of Banaras*, for example, devotes hardly a paragraph to the Kuṣāṇa phase at Banaras. Similarly, N.N. Ghosh in his *Early History of Kauśāmbī* (1935) discusses the Kuṣāṇa phase of this town in hardly two pages (pp. 64-65). Stuary Piggot's *Some Ancient Cities of India* (1945) may serve merely as a guide-book for the tourists. It does not convey much of historical importance. The *Sārthavāha* (1953) and *Kāśī Kā Itihāsa*, both written by Motichandra in Hindi, also do not contain much information on the Kuṣāṇa phase of Urbanization, though the *Sārthavāha* refers to some towns. B.N. Puri's *Cities in Ancient India* (1966) is no more than a mere list of ancient Indian towns. More comprehensive, however is Udai Narain Rai's *Hamāre Purāne Nagar* (1968). It discusses the origin and development of towns, their planning and administration and socio-cultural aspects though like other works referred to above, is deficient in discussion about Kuṣāṇa urbanism. *Ancient Cities and Towns of Rajasthan* (1972) by K.C. Jain deals with the history of towns in Rajasthan in the early mediaeval period and hence the study of Kuṣāṇa Urban settlements do not come within its purview. A. Ghosh in his *City in Early Historical India* (1973) has for the first time discussed the literary and archaeological material and traced the development of urbanization in ancient India. This work too, does not examine the evidence bearing on Kuṣāṇa Urban developments. But its real importance lies in the number of conceptual problems to which it has drawn our attention. In view of the limitations of the published works on the subject, a separate study of Kuṣāṇa towns in India appears to be a desideratum.

Archaeological excavations conducted in India, Pakistan, Iran, Afghanistan and central Asia suggest that more urban centres flourished in Kuṣāṇa times than in earlier or later periods. The Kuṣāṇa layers at excavated sites represent most prosperous phase of occupation. Many of such important urban centres find mention in ancient Indian literature, but apart from those which find mention in literary texts, the existence of many others can be proved on the basis of archaeological evidences. These towns were invariably situated on or in proximity of trade-routes. Therefore, the towns flourished as Industrial and commercial centres, apart from being seats of royalty and educational religious centres. They were systematically planned. Both religious and secular structural remains have been brought to light from excavated sites. The growth of towns in Kuṣāṇa times created a class of urban professionals who encouraged urban culture. With the disintegration of Kuṣāṇa power the fortune of towns was adversely affected. Majority of towns which flourished during the Kuṣāṇa period exhibit a declining trend in post-Kuṣāṇa times and became deserted in Gupta and post-Gupta times.

The present work represents my Ph. D. Thesis, "Kuṣāṇa Towns in India" (a study of urban centres during the Kuṣāṇa Period), submitted to the University of Patna in 1978. This study is based mainly on archaeological sources though literary evidences have been also utilised. The available evidences were fully examined at the time of the writing of thesis and some minor additions have been made at the time of its publication. Its publication was delayed due to various factors over which I had no control.

I take this opportunity to express my deepest sense of gratitude to my revered teacher Prof. Ram Sharan Sharma (Former Head of the Department of History Patna and Delhi University), who asked me to work on this topic, encouraged and guided me whenever I approached him with problems. I deem it my duty to acknowledge my sense of indebtedness to Prof. D.N. Jha of Delhi University (formerly my teacher in Patna University) under whose able guidance I have been able to complete this work. He took utmost interest in my work at every stage and helped in every possible way.

I express my sincere thanks to the Indian Council of Historical Research, New Delhi for the financial help which I received from them for field-study in India and also for awarding me a research followship without which the present work could not have been completed. I also acknowledge my sense of gratitude to the authorities of Patna University for permitting me to publish my thesis and subsidising its publication. I am also grateful to a large number of friends who have helped me at the libraries of the Department of History, Department of Ancient Indian History and Archaeology, Patna College and Patna University, Patna, Sinha Library, Patna; National Library, Calcutta; National Museum, Archaeological Survey of India, Indian Council of Historical Research, New Delhi, for always extending their cooperation and good will in my research.

I am extremely thankful to the Archaeological Survey of India, New Delhi and the Directorate of Archaeology and Museums, Government of Bihar, Patna for supplying me the copies of photographs inserted in this book and permitting me to publish them.

I am obliged to all my colleagues and friends in the Department of History, Patna University, who always extended their cooperation and encouraged me constantly. My thanks are also due to Prof. B.P. Sinha (Former Head of the Department of Ancient Indian History and Archaeology, Patna University), Prof. Upendra Thakur, Head of the Department of Ancient Indian and Asian Studies, Magadh University, Bodh Gaya, Shri Lala Aditya Narain, Keeper, National Museum, New Delhi, Shri P.N. Sahay of I.C.H.R. New Delhi, my colleague and friend Dr. Ajoy Kumar Singh and Shri S.K. Kaviraja of Patna University who prepared maps of the book. I cannot express in adequate words the services rendered by my wife Madhavi during the course of my research. She cheerfully burdened herself all domestic liabilities and provided me an opportunity to work peacefully. I most sincerely acknowledge the help of all. I owe much to Agam Kala Prakashan also for bringing out the book within a short time.

Reader, Department of History,
Patna University, Patna

KAMESHWAR PRASAD

July, 1983

Transliteration Chart

a	ā	i	ī	u	ū	e
अ	आ	इ	ई	उ	ऊ	ए
ai	o	au	ṛ			
ऐ	ओ	औ	ऋ			
k	kh	g	gh	ṅ		
क्	ख्	ग्	घ्	ङ्		
c	ch	j	jh	ñ		
च्	छ्	ज्	झ्	ञ्		
ṭ	ṭh	ḍ	ḍh	ṇ		
ट्	ठ्	ड्	ढ्	ण्		
t	th	d	dh	n		
त्	थ्	द्	ध्	न्		
p	ph	b	bh	m		
प्	फ्	ब्	भ्	म्		
y	r	l	v	ś		
य्	र्	ल्	व्	श्		
ṣ	s	h	kṣ	tṛ	jñ	
ष्	स्	ह	क्ष्	त्र्	ज्ञ्	

anusvāra—ṃ
visarga—ḥ

Abbreviations

ABIA	*The Annual Bibliography of Indian Archaeology*
ABIHI	*The Annual Bibliography of Indian History and Indology*
AGI	*Ancient Geography of India*
AHCQ	*Afghanistan Historical and Cultural Quarterly*
AI	*Ancient India*
AP	*Ancient Pakistan*
AR-ASI-CC	*Annual Report, Archaeological Survey of India, Central Circle*
AR-ASI-EC	*Annual Report, Archaeological Survey of India, Eastern Circle*
AR-ASI-FC	*Annual Report, Archaeological Survey of India, Frontier Circle*
ASI-AR	*Archaeological Survey of India, Annual Report*
ASIR Cunningham	*Archaeological Survey of India Report* by Cunningham
BMQ	*British Museum Quarterly*
CAKP	*Central Asia in the Kuṣāṇa Period*
CII	*Corpus Inscriptionum Indicarum*
EI	*Epigraphia Indica*
IA	*Indian Antiquary*
IAC	*Indo-Asian Culture*
IAR	*Indian Archaeology—A Review*
IC	*Indian Culture*
IHQ	*Indian Historical Quarterly*
IHR	*The Indian Historical Review*
INC	*Indian Numismatic Chronicle*
JAH	*Journal of Asian History*
JAHRS	*Journal of the Andhra Historical Research Society*
JASB	*Journal of the Asiatic Society of Bengal*
JBBRAS	*Journal of the Bombay Branch of the Royal Asiatic Society*
JBORS	*Journal of the Bihar and Orissa Research Society*
JBRS	*Journal of the Bihar Research Society*
JESHO	*Journal of the Economic and Social History of the Orient*
JGKSV	*Journal of the Ganganatha Jha Kendriya Sanskrit Vidyapeeth*
JH	*Journal of History*
JIH	*Journal of Indian History*
JNSI	*Journal of the Numismatic Society of India*
JOIB	*Journal of the Oriental Institute, Baroda*
JRAS	*Journal of the Royal Asiatic Society of Great Britain and Ireland*

JUPHS	*Journal of the U.P. Historical Society*
Mānasāra	*The Architecture of Mānasāra*
Manu	*The Laws of Manu*
MASI	*Memoirs of the Archaeological Survey of India*
Miliñda	*The Questions of King Milinda*
NIA	*New Indian Antiquary*
PIHC	*Proceedings of the Indian History Congress*
QRHS	*Quarterly Review of Historical Studies*
SBB	*Sacred Books of the Buddhists*
SBE	*Sacred Books of the East*
SI	*Select Inscriptions Bearing on Indian History and Civilization*
Viṣṇu	*Institutes of Viṣṇu*
Yājñ	*Yājñavalkya Smṛti*

Key to Plates

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CHAPTER ONE

THE ORIGIN AND GROWTH OF TOWNS IN ANCIENT INDIA

A GENERAL HISTORY OF URBAN GROWTH IN EARLY INDIA

THE URBAN history of India stretches back to the Harappan culture (uncalibrated radiocarbon date : 2300-1700 B.C.).[1] Several attempts have been made to explain the origin of the Harappan cities. Wheeler suggested that India received the idea of city life from Mesopotamia where it was well established in the 3rd millennium B.C.[2] Efforts have also been made to trace the origins of Harappan urban centres from the earlier as well as contemporary peasant cultures of the Baluchistan highlands.[3]

Whatever might have been the quantum of borrowing or stimulus from Mesopotamia or Baluchistan or elsewhere, the fact is undeniable that the Harappan cities were by and large the products of contemporary socio-economic conditions and were largely influenced by geographical considerations. The Harappan cities seem to have grown out of villages. These villagers possessed very fertile land,

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1. Bridget and Raymond Allchin, *The Birth af Indian Civilization*, Penguin Books, 1968, p. 140.
2. M. Wheeler, *Five Thousand Years of Pakistan : An Archaeological Outline*, London, 1950, p. 30.
3. D. D. Kosambi, *The Culture and Civilisation of Ancient India in Historical Outline*, Vikas Publishing House (Second Reprint), 1975, pp. 64-5. "The sudden completion...of cities which had no predecessors, which began from a dead start, points to a stimulus that came from outside..." See also, Romila Thapar, *A History of India*, Penguin Books, 1976, p. 24. "The antecedents of the Harappa culture are the village sites of the Baluchistan hills—the Nal culture and of the Makran coast to the west of the Indus delta—the Kulli culture, and certain of the village communities along the rivers in Rajasthan and Punjab". For similar views expressed, see, Bridget and R. Allchin, *op. cit.*, pp. 101-25. The authors have taken pains to collect data from several sites like Kili Ghul Mahammad, Rana Ghundai, Anjira and Siah-dambdamb, Mundigak in Baluchistan and Amri, Kot Diji, Chahnu-daro, Kalibangan and even Harappa in Sind, Punjab and Rajasthan to show the traces of pre-Harappan settlements at these sites. To quote them, "in all these cases the material culture provides hints of an intermediate period when forms and motifs emerge which are later identified as Harappan. What is particularly exciting in these recent excavations is the repeated evidence of continuity from pre-Harappan to Harappan times suggesting that a large if not a major element in the Harappan civilization must derive from the pre-Harappan culture of the Indus valley itself". p. 123).

watered by the Indus and its tributaries. It made surplus production possible and thereby support a large number of non-agricultural occupations, specially the merchants and the royalty who could control the means of production, consumption and distribution. In another way also the geographical factor contributed immensely to the rise of urban centres. The Indus and its tributaries provided the easiest way of communication for even heavy goods over long distances. Moreover, scarce raw materials could be easily imported and manufactured, goods exported through river channels. Thus, the Indus and its tributaries played a vital role in changing the economic condition of the inhabitants of the Indus valley and thus facilitated the emergence of earliest cities. It brought forth new outlook, new industries and crafts, new social classes emerged and paved the way for urbanization. The Indus cities thus appear to be a product of the contemporary circumstances.

The Harappan cities, however, did not leave a lasting impact upon subsequent Indian culture. Soon after 1700 B.C. the Harappan culture declined. Out of many factors responsible for the decline of this culture, economic stagnation seems to have been one of the most potent.[4] Moreover, increased population and over-utilized natural resources also adversely affected the fortunes of the urban culture of Harappa.[5] Thus, it appears, that the economic factors largely account for the rise as well as the degeneration of Harappan cities.

The Harappan cities did not leave any legacy of urbanism behind them. The early Vedic period (1500-1000 B.C.), characterised by the Aryan invasion of India, was a period of deurbanisation. The Aryans, primarily a rural folk, were quite unaware of the urban life. We hardly come across any city during this period. Some Indologists hold the view that the Aryans might not have been quite unfamiliar with the town life and that towns existed in the early Vedic period.[6] Undoubtedly we hear of cities in the *Ṛg Veda* but that finds place with the feats of god Indra, termed as Purandara or the demolisher of cities. The Vedic Aryans were in fact the destroyers of the cities, not its builders.[7] Although the Vedic Aryans dwelt in well protected citadels, these cannot be regarded as towns in the Harappan sense.[8] The total absence of towns during the early Vedic period was conditioned by the migratory habit of the early Aryans in quest of land and pasture and over predominance of cattle rearing as means of livelihood. Moreover, the threat of constant war and invasions from the original non-Aryans also made it quite impossible for the Vedic Aryans to lead settled life,[9] without which towns could never grow. Thus, the material culture of the early Vedic period hardly favoured the rise of any city. Archaeology has not succeeded as yet in revealing any trace of city life during this period.

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[4] R. S. Sharma, *Light on Early Indian Society and Economy*, Bombay, 1966, p. 54.

[5] W. A. Fairservis, *The Roots of Ancient India* (2nd Revised Edition), Chicago, 1975, p. 304.

[6] S.K. Das, *The Economic History of Ancient India*, Calcutta, 1944, p. 28. See also, A. N. Bose, *Social and Rural Economy of Northern India*, Vol. I (3rd edn.), Calcutta, 1970, p. 193.

[7] God Indra is credited to have destroyed many existing cities. He is said to have wiped out Varaśikhās at Hariyūpiya (Harappa) and Narminī. In one of the Ṛg Vedic hymns Indra is requested thus, "Strike down; O Māghavan (Indra), the host of Sorceresses in the ruined city of Vailāsthānaka, in the ruined city of Mahāvailastha". See, Bridget and Raymond Allchin, *op. cit.*, p. 155.

[8] R. S. Sharma, *op. cit.*, p. 55.

The situation, however, changed somewhat from the later Vedic period (1000-600 B.C.), facilitating the growth of cities by 6th century B.C. This change occurred due to the eastern movements of the Aryans and the new knowledge of iron technology. With the increase in population, the Aryans were compelled to move eastward in search of more land and pasture. The later Vedic texts indicate that the inhabitants of the "Land of Five Rivers" (Panjab), after crossing western and eastern U.P., reached as far as north Bihar. The story of the Videgha Māthava, preserved in the *Śatapatha Brāhmaṇa* (I, 4.1, 10 to 17) informs us how this king, who formerly lived in the Panjab, on the banks of the river Sarasvatī, carried fire eastwards to Videha, as far as the Sadānīrā river (Gaṇḍak). It implies that the area lying between the Panjab and Bihar was Aryanised by burning the forests. Undoubtedly some forest tracts might have been burnt, but since wood was immensely valuable as building material, it might not have been destroyed indiscriminately. It is better to suppose that dense and thick forests might have been cut by a stronger metal than copper and bronze. Evidently it was the knowledge of iron technology which helped the eastward expansion of the Aryans. The iron also considerably changed the agricultural output. It could become possible, with iron axes, ploughshares and other tools and implements to cut the deep-rooted and dense forests, make them cultivable and habitable.

Numerous references to the wide use of iron are preserved in the later Vedic texts. The earliest clear reference of this metal is to be found in the *Yajurveda* (*Taittirīya Sāṃhitā* IV, 7.5) where a black metal is mentioned. The *Atharva Veda* refers of the *Śyāmamayās*, meaning iron. Similar other references are to be found in the later Vedic texts.[10] The literary sources, thus, tend to suggest that by 700 B.C. the use of iron had become common in agriculture.[11]

The scriptural evidence of the use of iron is confirmed more or less by the discovery of this metal in archaeological excavations from the Painted Grey Ware levels, generally assigned to the later Vedic period, at Alamgirpur, Atrañjīkherā, Ahicchatra (U.P.) and Noh (Rajasthan). Iron slags and ovens, discovered from Hastināpura and Atrañjīkherā, suggest the local smelting of iron at these places.

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[9] R.S. Sharma, *op. cit.*, p. 55.

[10] At one place in the *Śatapatha Brāhmaṇa* (14.2.2.54) an earthen pot is preferred to a golden; copper or even an iron pot. At another place (*Sat. Br.* 13.2.8-16), it is stated that a horse should be sacrificed with a golden tool, copper should be used for sacrificing another set of animals and iron for all other animals. The *Suttanipāta* (Kāśī Bhāradwāja-Sūtta) describes a ploughshare which could apply only in the case of an iron ploughshare. See Dilīp K. Chakrabarti, "The Beginning of Iron in India", *Antiquity*, Vol. 50, no. 198 (1976), pp. 120-21.

[11] *Antiquity*, Vol. 50, no. 198 (1976), pp. 120-21.

The culture which flourished at this time has been dated *c.* 800 B.C., on the basis of C_{14} dating. Iron has also been reported from Chirānd, Mahiṣdal and Pāṇḍurājār Dhibī in eastern India, from the black and red ware levels. The radiocarbon dating for the iron specimens from these sites has been given as 750 B.C.[12] Thus the literary as well as archaeological evidence tend to suggest the use of iron round about 8th century B.C.[13]

Painted Grey Ware sherds were noticed at many sites in the western U.P. and adjoining areas along with iron objects. The excavations of these sites also suggest that the Aryans no longer lived a life of nomads, but spent a well settled life in their wattle-and-daub houses, tamed cattle and engaged in agriculture on a larger scale than in the earlier period. It was evidently the impact of the iron technology which made it possible for the later Aryans to settle permanently at a fixed place, cultivate land and produce a variety of crops. Deep ploughing became possible with the use of iron ploughshares, drawn by several oxen. Irrigational facility was provided by rivers. A number of grains like barley, wheat, rice, beans, seasamum etc. came to be grown. Thus the pastoral economy of the early Aryans was transplanted by the agriculture. The stress on agriculture produced sufficient food to support the increasing population of the community.

Simultaneously, new occupational classes, engaged in various arts and crafts, emerged. The carpenters, metal workers, potters, tanners, basket and rope-makers, weavers, jewel-makers, came to occupy prominent place in the society along with the farmers. Also came to the forefront a new class, the merchants or at best the pedlars who acted as a middleman between the producer and the consumer. But gradually they attained greater status in the economic set-up by disposing of the finished goods of the producers and supplying raw materials, essential for various arts and crafts. These merchants preferred to live in places which commanded land or water routes and lay in the proximity of the areas producing enough raw material. Thus markets and industrial centres began to emerge, which later grew into towns.

Although some of the literary texts refer to words like *nagara*, *nāgrin* and great towns like Kauśāmbī, Kośala and Vidarbha, it is doubtful whether these places were full-fledged towns. They appear as seats of royalty,[14] which was assuming new dimensions during the later Vedic period, or as marts. Thus, although the forces of urbanisation were crystallising, they did not produce any cities during the later Vedic period. The urban process could attain maturity only in the subsequent phase.

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[12] *Antiquity*, Vol. 50, no. 198 (1976), p. 118.

[13] However, some scholars have underestimated the value of iron as an effective weapon which helped the eastward expansion of the Aryans as well as profoundly affected the economic set-up. It has been suggested that the copper and bronze implements would have accomplished the task of clearing the dense jungles just like iron implements. Moreover, even without the use of iron or any other metal, the jungles could be cleared by fire. See A Ghosh, *The City in Early Historical India*, Simla, 1973, pp. 8-9. For a detailed discussion, see Dilip K. Chakrabarti, "Beginning of Iron and Social Change in India", *Indian Studies* : *Past and Present*, Vol. 14, (1973), pp. 329-38.

By the 6th century B.C. the stage was well set for the urban revival in northern India. The period from *c*. 600 B.C. to 322 B.C. is noted as an era of economic prosperity, marked by the growth of numerous towns in India. Aristobulus is said to have noticed the residue of nearly thousand towns in the Indus area alone. Though this account seems to be highly exaggerated, there is no doubt that several towns existed in northern India during this period. The *Jātakas*, the *Vinaya texts* and the *Suttapiṭaka* mention as many as sixty towns throughout India.[15] Important cities like Śrāvastī were numerous and Ānanda in the *Mahāparinibbāṇa Sutta* expresses his anxiety over the Buddha's decision to attain *parinirvāṇa* at Kuśīnārā, leaving aside other important cities like Rājagṛha, Sāketa, Kauśāmbī and Banāras. The same idea is repeated in the *Mahāsudāssana Jātaka* also.[16] However, some of these cities had a later origin.[17] Thus, by the time of the birth of the Buddha, towns in north-eastern India had become fairly common.

Several factors contributed to the urban revival. The first place may be assigned to the large scale use of iron in agriculture, expedited by the use of bellows.[18] With the knowledge of this new device, production of iron tools and implements became easier and convenient. In turn, the clearance of deep jungles for agricultural purposes and deep ploughing for cultivation, became easier. Whenever the ploughshares and other implements became blunt, they could be effectively sharpened with the help of the bellows. The new technique thus enabled the peasants to bring under cultivation more lands, grow a variety of crops and produce surplus which could be consumed by the inhabitants of towns as well as used for the commercial exchange.[19] Thus with the common use of iron a congenial environment was created for the growth of urban centres.[20]

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[14] R.S. Sharma, *op. cit.*, p. 59. Rhys Davids also gives a list of principal cities which existed in the 7th century B.C. in India. These were Ayodhyā, Vārāṇasī, Campā, Kampilla, Kośāmbī, Madhurā, Mithilā, Rājagaha, Roruka, Sāgala, Sāketa, Sāvatthi, Ujjenī and Veśālī. See, Rhys Davids, *Buddhist India* (Reprint), Motilal Banarsidass, 1971, pp. 34-40. However, on the basis of archaeological excavations, it can be suggested that the antiquities from these cities do not carry us beyond the 6th century B.C.

[15] S.K. Das, *op. cit.*, pp. 180-83.

[16] *The Jātakas* (ed.) E.B. Cowell, Vol. I, 95, Cambridge, 1895.

[17] A. Ghosh, *op. cit.*, p. 16. However, the archaeological evidence suggests that Rājagṛiha, Vaiśālī Chirānd and Kauśāmbī were the only towns which flourished in the 6th century B.C. Śrāvastī had later origin.

[18] R. S. Sharma, *op. cit.*, p. 60.

[19] *Ibid.*

[20] R.S. Sharma "Iron and urbanisation in the Ganga Basin", *Indian Historical Review*, Vol.I , no. 1 (1974), p. 100.

Simultaneously, the number of arts and crafts also increased considerably during this period. A good number of service occupations such as washermen, barbers, tailors, weavers as well as crafts connected with production like potters, leather workers, garland-makers, ivory-makers, carpenters, brick-makers, etc. are mentioned in the *Jātakas*. The diverse arts and crafts mentioned in the *Jātakas* suggest that large number of people, specialised in different crafts, were engaged in non-agricultural occupations.[21]

One notable feature is the localization of industries at certain places. The *Jātakas* bear evidence to this tendency of localization. Isolated settlements of hunters, carpenters, washermen, weavers, potters, smiths and others are mentioned in the *Jātakas*. The localized centres prospered because they were located at such places which produced raw materials as well as commanded traffic let outs for the consumption of the finished goods. These centres soon assumed the dimensions of markets and grew into towns.

Another factor which helped the growth of urban centres was the emergence of guilds which regulated the service conditions as well as the production of the artisans and craftsmen. The guilds occupied an important place in the economy of the period. As many as eighteen guilds are referred to in the later Buddhist texts. Each guild was allocated a particular section of the town. This tendency gave impetus to the localisation of crafts and industries as also the hereditary transmission of skill possessed by a member of a particular art or craft. The heads of the guilds lived in towns and carried on the urban tradition.

Brisk inland and foreign trade, noticed in the literary texts of the period, particularly the *Jātakas*, also worked as a stimulus to the growth of urban centres. In spite of hazardous land and river routes, trade went on unabated. The *Jātakas* often mention caravans of 500 or 1000 carts, loaded with merchandise, going from one place to another.[22] However, the trade was mainly confined to luxury goods. Trade greatly facilitated the mobility of labour and led to the establishment of numerous markets which later assumed the character of urban centres. Since most of the towns mentioned during the period were in the proximity of major trade routes they soon developed into commercial centres.

Trade was further augmented by the regular use of metal coins. Although some literary texts give the impression of the prevalence of money in the early and later Vedic periods (*niṣka*), that evidence is not corroborated by the archaeological sources. The earliest Indian coins, punch-marked, have been assigned to the time of the Buddha. The common use of coins during the period is attested by both literary and archaeological sources. The minting of coins eased the process of commercial exchange and brightened the prospects of trade. Another factor which seems to have greatly helped the commercial growth was the knowledge of script. Now the accounts of transactions, profits and losses came to be recorded which worked as guideline for further commercial transactions.

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[21] However, the archaeological evidence for the increased division of labour is not very impressive in the iron age sites of the middle Gangetic basin, nevertheless material remains of many crafts discovered from these sites suggest specialised workers engaged in various arts and crafts. *Ibid.*

[22] Merchants from far off places like Taxila used to come regularly to Banaras for sale and purchase of goods. The *Bāveru Jātaka*, *Samkha Jātaka*, *Mahājanaka Jātaka*, *Sammudavāṇija Jātaka*, etc. imply even foreign trade during the period. Thus, as a result of trade the whole of India became one unit and it developed mercantile relations even with foreign lands. See, *The Jātaka*, (ed.) E. B. Cowell, translated various hands, Vols. I-VI, Cambridge, 1895-1907.

The contemporary political developments also may have helped the growth of towns. The break-up of the old tribal units and the emergence of the first territorial states led to the growth of certain places as seats of political authority in the 6th century B.C.[23] The capitals of these *mahājanapadas* were situated at such places which commanded traffic routes and strategic importance. With the growing complexity of administrative set-up large number of royal officers were appointed who resided in the capitals of these states. Along with them army, artisans, craftsmen and traders also came to stay in the capitals. The capitals thus became the centres of royal authority, trade, industry, education as well as religion and developed in well grown towns.

Social changes in the post-Vedic period also created a favourable atmosphere for the growth of towns. The old Vedic social structure, based on varṇa system, considerably changed simultaneously with the changing economic set-up. The vaiśyas, who were hitherto denied privileges, earned enormous fortunes in trade and wealth. But their social status did not change in the orthodox village set-up. The situation in the towns, however, favoured the vaiśyas, where they were given reverence as they controlled the economy of the period by lending money on interest for crafts and commerce. We often come across merchants in the *Jātakas* worth eighty crores and possessing fabulous wealth. By dint of their wealth the *seṭṭhīs*, invariably belonging to the vaiśya community, acquired a high status in the urban society so that even royal favours were bestowed upon them.[24]

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[23] The Buddhist text *Aṅguttara Nikāya* and the *Bhagavatī Sūtra*, a Jain text, give the list of sixteen great kingdoms or "Solasa Mahājanapada", flourishing during this period. The *Mahāvastu* (I.34) also gives a similar list. The list provided by these texts differs slightly from each other. The common names in the list are Kāśī, Kośala, Aṅga, Magadha, Vajji, Malla, Chedi, Vatsa Kuru, Pañcāla, Matsya, Surasena, Asmaka, Avanti, Gandhāra and Kamboj. See H.C. Raychaudhury, *Political History of Ancient India* (7th edn.), Calcutta, 1972, p. 85. It has been suggested that the exclusion of western Rajasthan, Gujrat, Orissa and South from the list may imply the absence of urban centres in these areas at the time of the composition of the list. See, A Ghosh, *op. cit.*, p. 35.

[24] In fact, both the royalty and the merchant community guarded the rights and privileges of each community. In turn, leisure and money combined together to give protection to several arts and crafts and clearly demarcate the rural and urban set-up. The brahmanas dominated the old village set-up while the merchants exerted their influence in towns. The idea of caste system (or varṇa system ?) influencing the urban growth in India has been discussed elsewhere also. See, S.P. Gupta, "Two Urbanizations in India : A side Study in their social Structure", *Purātattva*, No. 7 (1974), 53-60.

The rise of heterodox sects, particularly Buddhism and Jainism also created a congenial atmosphere for the efflorescence of towns during the period. The orthodox school represented by Baudhāyana, Āpastamba and others did not favour the inherent features of urban life like trade, usury, public places, entertainment houses, shops, prostitutes, etc.[25] But the new religious sects never imposed any such restrictions on the mercantile community. They rather encouraged various concomitants of the city life. This ensured the overwhelming support of the trading community to Buddhism and Jainism and further gave an impetus to the urban growth. It has been rightly suggested that "Buddhism is a sure sign that urbanism had reached the lower Gaṅgā basin.[26]

Another important factor influencing the growth of urbanization was the opening up of a number of trade routes in the wake of the movement of Alexander's army from Greece to India. It brightened the prospects of commercial relations between north-west India and western Asia. Moreover, the routes leading to the Deccan and South India provided new markets for north Indian commodities. This becomes clear from the discovery of NBP Ware and iron objects, datable to the pre-Mauryan period in the northern Deccan. Thus, several factors were responsible for the urban revival in the 6th century B.C.

Some marked differences may be pointed out between the Bronze Age and Iron Age cities in India. The first contrast seems to be qualitative. Fortification and planning seem to be the prime characteristics of the bronze age cities which might not be always true in the case of iron age cities. Essentially later cities were dominated by those persons who were primarily concerned with crafts and commerce. Qualitatively also the number of cities increased enormously in the Iron Age. Very few of the Harappan sites can be termed as cities, but the number of towns in the age of the Buddha was greater. At least ten urban sites, e.g. Campā, Rājagṛha, Pāṭaliputra (though later), Vaiśālī, Vārāṇasī, Kauśāmbī, Kuśīnagara and Śrāvastī (later ?), as also Chirānd, Tilaurākoṭ and Piprahavā, flourished as urban centres in the Ganga basin as indicated by both literary and archaeological evidence. Hence the impact of the later cities on the society was stronger.[27]

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[25] Perhaps this was the reason which prompted Baudhāyana to remark, "(if you say that) he who lives in a town and whose body is covered with the dust, (raised) by others and whose eyes and mouths are filled with it, will obtain salvation, if he restrains himself, (I declare that) is impossible. The dust raised by carriages, horses, elephants, and cows, and (that which comes from grain is pure, blamed is (that raised) by a broom, goats, sheep, donkeys and garments". Baudhāyana, II.3.6.33-34. Āpastamba even asks members of the higher varṇas not to take the food prepared in city and later Manu forbids the frequent visit to cities.

[26] W.A. Fairservis, *op. cit.*, p. 380. See also, R.S. Sharma, "Material Background of the Origin of Buddhism", Mohitsen and M.B. Rao (ed.) *Das Kapital Centenary Volume—A Symposium*, Delhi, 1968, pp. 63-64.

[27] *IHR*, Vol. I, no. I, (1974), pp. 100-101.

Thirdly, the Bronze Age towns were invariably situated on river banks because rivers supplied regular water to the inhabitants. The same was true to a large extent in the case of Iron Age towns in the Gaṅgā basin. But a new departure from this tradition is noticed in the Iron Age. Now the towns could be settled away from rivers also, e.g., Vaiśālī, Rājagṛha, etc., where the drinking water was made available by digging wells and tanks. This became possible by the widespread use of iron tools and implements.[28] Many other such distinctions between the cities represented by two cultures can be pointed out. Whereas bronze was used scarcely by the Harappans, iron was used profusely in the age of the Buddha. The staple diet of the Harappans was wheat, but rice became popular with those who inhabited the Gaṅgā basin. Similarly, the trade of the Harappans seems to be based on the idea of exchange, but the latter was facilitated by the use of metallic money. Moreover, whereas the Harrappan cities vanished without leaving any legacy of urbanism, the "second urbanization" reached its zenith under the Kuṣāṇas and continued up to the 6th century A.D. Even when towns declined in the post-Gupta times, the legacy of urbanisation was not completely wiped out as that of the Harappans.[29]

The Mauryan period (322-180 B.C.) witnessed the further growth of towns. The rigid state control of agriculture, forest, mines, metallurgy, trade and artisans expanded the Mauryan economy considerably. Arts and crafts as well as trade and commerce further increased. This economic development widened the scope of the urban growth in the Maurya period. Strict regulations were devised for city administration and the duties of the city superintendents were clearly demarcated in the *Arthaśāstra* of Kauṭilya. The incorporation of provisions for city administration in the *Arthaśāstra*, supposed to be a work of the Mauryan period, implies that cities had become a normal feature of the day and that it demanded special attention of the government on account of the vital role it played in the economic set-up of the period. The *Indika* of Megasthenes, the *Jaina sūtras* and the *Mahābhāṣya* of Patañjali, all attest the existence of numerous towns during the period. The *Jaina Sūtras*, composed about the end of the fourth or the beginning of the third century B.C.,[30] refer to several units of settlement.[31] Pātañjalī also, who flourished about

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[28] *IHR*, Vol. I, no. I, (1974), p. 102.

[29] *Ibid.*, pp. 102-103. However, it has been pointed out that "the basic nature of the first and second urbanisation remained the same—the growth of only the capital cities or trading centres under the political patronage of the ruler, given directly to the trading community to create wealth and thereby earn prestige of the ruling authority; the remaining part of the country stood at the level of peasantry and nomadism". See *Purātattva*, No. 7 (1974), p. 58.

[30] H. Jacobi, *Jain Sūtras, SBE*, Vol. XXII, p. XIII.

[31] The *Ācarāṅga Sūtra* (Bk. II, 11.7) mentions, "villages, towns, markets, or a capital, hermitages, cities and halting places for caravans. Similarly, the *Kalpasūtra* (IV. 89) refers to "scot free towns, or towns with earth-walls, or towns with low walls, or isolated towns, or towns accessible by land and water, or towns accessible either by land or by water only, or in natural strong holds, or in halting-places for processions or for caravans, in triangular places, or in places where three or four routes meet......"

150 B.C., was well acquainted with *nagara*, *grāma* and *ghoṣa* (stations of herdsmen) as units of settlement. Reference is made to many important cities in his *Mahābhāṣya*.[32] Archaeologically, the existence of many of these towns can be proved.

In the post-Mauryan period, especially under the Kuṣāṇas, the process of urbanisation deepened further due to political stability brought about by them, opening of new commercial routes, brisk foreign and inland trade, supported by the issue of a large number of metal coins and increased knowledge of arts and crafts. Numerous urban settlements which prospered during the early centuries of the Christian era have been brought to light by recent excavations in India, Pakistan, Iran, Afghanistan and Soviet Central Asia. Contemporary literary texts also suggest the increased number of towns during this period. The *Bṛhat Kalpa Bhāṣya*, datable to the early centuries of the Christian era,[33] gives a list of 25 states with their capitals.[34] It is well known that the capitals of these states were important cities. Other literary texts indicate the extent to which urbanism had come to exert influence on the material life of the people during the early centuries of the Christian era. The *Milindapañho*, the *Lalitavistara*, the *Buddhacarita* and *Saundarānanda* of Aśvaghoṣa present the city life as of comfort and luxury where trade and industry flourished, education was imparted, religious procession and discourses took place, and where people from different places flocked.[35]

However, the urban growth in India, especially in northern India, witnessed a set-back in the post-Kuṣāṇa period. Many of the old important towns either declined in importance during the Gupta and post-Gupta times or were completely abandoned. The Chinese pilgrims Fa-hsien and Hsuan-Tsang who visited many of the towns in northern India in the Gupta and post-Gupta period noted that many of the towns had lost their value. Archaeologically also the Gupta layers represent poor signs of habitation in most cases. It has been justly remarked that "the poverty of the Gupta layer structures in comparison with those of the Kuṣāṇa layer, however shocking to the golden agers, is an archaeological fact in northern India.[36]

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[32] The most important cities noted by Pātañjalī were Taxilā, Mathurā, Pāṭaliputra, Saṃkisā, Sāketa, Vārāṇasī, Kauśāmbī, Hastināpura, Gāvidhumaṭa (identified with Kudarkoṭ in Etah district), Ahīcchatrā, Kānyākubja (Kanauj), Ujjaynī, Māhiṣmati, Nāsikya and Kāñchīpur. See, B.N. Puri, *India in the Time of Pātañjali* Bombay, 1957, pp. 86-7. See also, P. V. Kane, "Ancient Cities and Towns mentioned in the Mahābhāṣya", *JBBRAS*, Vol. XXVII, pt. I (1951), pp. 38-42.

[33] J. C. Jain, *Life in Ancient India as Depicted in the Jaina Canons*, Bombay, 1947, p. 246.

[34] For details, see J.C. Jain, *op. cit.*, p. 246. If we compare the list of states as given in the *Bṛhat Kalpa Bhāṣya* with that of the Buddhist *Aṅguttara Nikāya*, giving the list of "Solasa mahājanapadas", it would appear that many earlier places do not find place in the later list. This might be taken to suggest that many old towns were replaced by the new ones. It is surprising to find that Kapilavastu does not appear in the Jain text. Similarly, the mention of Rājagṛiha as the capital of Magadha is intriguing.

[35] Such an account of the city of Sagala is preserved in the *Milindapañho*. The city is described as a meeting place of people of many countries, people from Scythia, Bactria, China and Vilata; people of Ujjenī, of Bharukaccha, of Benāras, of Kośala, and of border lands, people from Magadha and Sāket and Suraṭh, and the west; from Koṭumbara and Madhurā, from Alexandria, Kashmir and Gandhāra—all come to take up their residence there. See, Rhys Davids, *The Questions of King Milinda*, SBE, Vol. XXXVI, pt. II, p. 211.

The brief survey of the history of urban growth in India, thus, does not present a continuous development. The process of urbanization started with the Harappan culture but was followed by that of de-urbanisation in the Vedic period. However, cities reemerged towards the beginning of the 6th century B.C. This may be termed as the phase of re-urbanisation. This process continued for a long time and left an undeniable impact upon the posterity.

URBANISM IN THEORY

The above discussion throws some light on the factors that might have helped the urban growth in India at different stages. But it is very difficult to define exactly what the urbanisation actually means, what are its distinctive characteristics and how an urban settlement is different from a rural one. Several attempts have been made by historians, archaeologists, sociologists and anthropologists to define a town. Efforts have been made to reach a consensus as regards the nature of urbanisation. But that has proved to be an enigma so far. All differ considerably from each in indicating the nature, indices or even causative factors of urban growth.

Several trends in the study of urban history, e.g., the secular, thematic, diffusionist etc., have been noticed.[37] Historians consider the city as an Unit of Settlement, established by man, influenced by several historical factors. The archaeologists take any settlement as urban which exposes few streets and one or two public buildings.[38] On the other hand anthropologists and sociologists consider urban growth as a natural process and consider population and ecological factors as of prime importance in the growth of towns.[39] Similarly an economist would look into the growth of towns only in terms of economic factors.

Some definitions of urbanisation hold the trend. But the main limitation of all the theories and definitions is that each of them emphasises the role of only one or another factor and never consider that various factors were responsible for the urban growth. Nevertheless, the various definitions suggested, give an idea about the nature of towns as well as the factors influencing their growth.

The concept of urbanisation was first evolved by V. Gordon Childe who prescribed ten criteria for distinguishing the urban settlements from the rural ones.

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36. R. S. Sharma, "Problems of Social Formations in Early India", General President's Address, *PIHC*, XXXVI session, Aligarh, 1975, p. 7.
37. S.G. Checkband, "Towards a Definition of Urban History", pp. 343-61 in Edward Arnold (ed.) *The Study of Urban History*, London, 1968.
38. H.M. Mayer and C.F. Khon (ed.) *Readings in Urban Geography*, Chicago, 1967, p. 59.
39. H.D. Sankalia, "From Food Collection to Urbanisation", pp. 66-104 in T.N. Madan and Gopal Saran (ed.) *Indian Anthropology*, Asia Publishing House, 1962.

They were (a) dense population, (b) non-food producing classes supported by the surplus produced by peasants, (c) presence of deity or divine king, (d) monumental buildings, (e) existence of a ruling class, (f) the knowledge of writing, (g) acquaintance with science, (h) artistic expressions, (i) foreign trade, and (j) communal feeling among the inhabitants of a settlement.[40]

Thus according to Childe, the distinguishing feature of town is that it has more inhabitants than a rural settlement and is dominated largely by non-agricultural occupants like artisans and craftsmen, state officials, merchants and other persons of similar occupation. These people did not work in fields but depended on the surplus food produced by the peasants. The surplus was collected either by a divine deity or in his name by a human king. The deity or the king lived either in a temple or a spatial palace, symbolising power and authority. Thus monumental buildings came into existence which were not to be found in rural settlements. The king or the deity was supported by a number of officials or priests in its duty of collecting and distributing the surplus. At this stage knowledge of writing and science became essential for maintaining the records of revenue receipts and expenditure as well as for erecting lofty mansions and temples. Consequently script, arithmatic, geometry, astronomy and other sciences came to be developed. Foreign trade became essential for the import of raw materials required either by industries or for the erection of dwellings for the deity. Thus city grew as an unit in which every constituent did the work assigned to it and a communal feeling arose among them. Childe, thus, indicates the process through which rural settlements in early Mesopotamia changed their character and became urban centres. The same idea is repeated at another place also.[41]

However, Childe's criteria for distinguishing urban and rural settlements have been criticized severely. R.M. Adams calls it a "mixed bag of characteristics" and points out that the criteria as prescribed by Childe vary essentially from each other as regards their importance as factors or as index of urban revolution. Moreover, it is argued that wide use of metallurgy, on which Childe puts greater emphasis, was a later development during the Early Dynastic Mesopotamia, and by that time cities had already appeared as a feature of Mesopotamian culture.[42] Adams suggests that craftsmen and merchants as social groups appeared much later and hence

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40. V. Gordon Childe, "The Urban Revolution", *The Town Planning Journal*, Liverpoole, XXI (1950) 3-17, as cited in A. Ghosh, *op. cit.*, pp. 23-24. See also, Childe, *Man Makes Himself*, London, 1956, Chapters VI-VII and *Idem.*; *What Happened in History*, Penguin Books, 1972, Chapter V.
41. "The thousand years or so immediately preceding 3000 B.C. were perhaps more fertile in fruitful innovations and discoveries than any period in human history prior to the sixth century A.D. Its achievements made possible that economic reorganization of society that I term the Urban revolution". See Childe, *What Happened in History*. Penguin Books, 1972, pp. 77 & 97.
42. R.M. Adams, *The Evolution of Urban Society, Early Mesopotamia and Pre-Hispanic Mexico*, Rochester, 1955, pp. 11-12.

cannot be taken as a major factor heralding the emergence of cities.[43] Similarly, the theory of social surplus of Childe seems to be misleading without any institution, which only was responsible for the accumulation and distribution of surplus as a means for social expansion.[44] According to Adams, three factors were mainly responsible for the institutional growth. Firstly, reliance on widely different food resource, secondly, occupational specialization and finally, the adoption of irrigation.[45]

Others have also criticised the urban concept of Childe. Wheatley does not agree with Childe that the technology was the motivating force behind the urban growth. He suggests that the available archaeological evidence does not imply any substantive correlation between technological innovation and the emergence of first ceremonial cities.[46] Wheately thinks that Childe's ten criteria of urbanisation are delineatory rather than explanatory. Childe, it is argued, does not establish any functional interactions between these criteria. Moreover, all the ten characteristics of urbanisation are not to be noticed necessarily in towns only.[47]

On the other hand Wheately is inclined to believe that the cities grew as a result of 'primary' and 'secondary' diffusion.[48] He sees five conceptually distinct approaches (e.g., reliance on ideal type constructs, formation of ecological theories, delineation of trait complexes, conceptualization of the city as a centre of dominance and an expediential approach based on the size of urban population) which help in the investigation of urban forms.[49] He has also examined the role of trade and or marketing, irrigation, warfare and religion as factors of prime importance in the growth of cities and arrives at the conclusion that "city and state were coeval, indeed the city was the organising principle of state and all generated cities were in their early phases city states".[50]

Childe's concept of urbanism has been put to criticisms by Mumford also. According to Mumford the transformation from village to city which has been described by Childe as Urban Revolution, although indicates the important part played by the city, does not imply the process by which this change took place. It rather seems to suggest the same shift which came as a consequence of the industrial revolution in modern times with stress on economic endeavours. Thus the explanation given by Childe 'obscures rather than clarifies what actually happened'.[51] Mumford, on the other hand, adopts a sociological approach to the subject. He suggests that the city came into existence as a fusion of neolithic and paleolithic culture.[52] The city developed from village in which the king or the institution of kingship played a vital role.[53]

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[43] To quote Adams, "the expansion of craft production and the market, and the simultaneous appearance of craftsmen and merchants as important (although still numerically small) social groups, occurred too late to be regarded as major precipitating factors behind the growth of cities, class stratification and the emergence of dynastic authority". See, *Idem.*, "Factors Influencing the Rise of Civilization in the Alluvium: Illustrated by Mesopotamia", (ed.) C.H. Kraeling and R.M. Adams, *City Invincible*, Chicago, 1960, p. 32.

[44] *Ibid.*, p. 28.

[45] *Ibid.*, pp. 28-29.

[46] P. Wheately, *The Pivot of the Four Quarters*, Chicago, 1971, p. 279.

[47] *Ibid.*, pp. 373-74. See also, *Idem.*, "The Concept of Urbanism", (ed.) Peter J. Ucko, R. Tringham and G. W. Dimbleby, *Man Settlement and Urbanism*, Duckworth, 1972, p. 612.

[48] *Ibid.*, p. 7.

[49] Ucko, Tringham & Dimbleby, *op.cit.*, p. 102.

[50] Wheately, *op.cit.*, pp. 282 & 398.

Geiden Sjoberg also considers the support of a well organized state essential for the existence of any city. He admits the importance of economic prosperity in the urban growth, but does not consider it a crucial factor for the rise of towns. According to him, even the economic endeavour requires the support of a well-organized power structure and asserts that cities can never flourish in the absence of state. Thus state is of primary importance while the economic considerations are of secondary importance in the urban growth.[54]

The above view has been supported by many others. All of them consider the role of socio-political institutions of first degree in effecting a change from rural to urban settlement. Their main argument is that in the absence of an effective social or political institution—State king or even a mercantile community, 'surplus' could not be produced on which the existence of towns depended; 'surplus' was the product of these institutions, not the institutions came into existence as a consequence of surplus production.[55]

Opposed to this view, there are other scholars who consider economic factors primarily responsible for the emergence of towns. They argue that the increased food production by villages with the help of new agricultural implements, led to the

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51. Lewis Mumford, *The City in History*, Pelican Books, 1975, p. 42.
52. *Ibid.*, p. 37.
53. "What I would suggest is that the most important agent in effecting the change from a decentralized village economy to a highly organized urban economy, was the king, or rather, the institution of Kingship . . . . In the urban implosion, the king stands at the centre : he is the polar magnet that draws to the heart of the city and brings under the control of the palace and temple all the new forces of civilization. Sometimes the king founded new cities; sometimes he transformed old country towns that had long been a-building placing them under the authority of his governors : in either case his rule made a decisive change in their form and contents". See Mumford, *op.cit.*, p. 47, 26 cf. *City Invincible*, p. 233.
54. "Urban growth in societies is invariably highly correlated with the consolidation and expansion of a political apparatus, be the result of a kingdom or an empire . . . . a commercial organization is necessary if a political system is to be maintained, but it is not crucial for urbanization . . . . large scale economic enterprise is highly dependent on an effective power structure . . . . Nowhere do cities, even commercial ones, flourish without direct or indirect support of a well-established state system". See, Geiden Sjoberg, *The Preindustrial City of Past and Present*, New York, 1960, pp. 69, 75.
55. Dilip K. Chakrabarti, "Concept of Urban Revolution and the Indian Context", *Purātattva*, New Delhi, No. VI (1972), pp. 29-30; also, Dilip K. Chakrabarti, "Some Theoretical Aspects of Early Indian Urban Growth", *Purātattva*, 7 (1974), pp. 87-89. P.M. Hauser and L.F. Scenore (ed.) *The Study of Urbanization*, London, 1965, p. 270; A. Ghosh, *op. cit.*, pp. 20-22; S.K. Das, *op. cit.*, p. 183.

establishment of cities. The city had to depend for the supply of food on villages, it could not produce itself the required food for existence. Hence the regular supply of grains was essential, unless the villages produced beyond their requirements, they could not supply it to towns. Thus, surplus production was an essential precondition for the rise of towns. It was the introduction of iron plough which produced enough surplus and cleared the way for the emergence of cities in north-eastern India round about 600 B.C.[56]

Others like N.R.Banerjee, Krishna Deva, B.K.Thapar, M.C. Josbi, all hold the same line and give top priority to socio-economic factors in the growth of urbanisation. Banerjee argues that the growth of cities in India depended mainly on socio-economic agent and political power might have helped in the determination of the shape of some cities or their expansion.[57] Krishna Deva sees in the "second urbanization in India, a culmination of several socio-economic factors operating over many preceding centuries". According to him, the extensive use of iron, subsequent clearance of forests on large scale brought in its chain, intensive agriculture, surplus wealth, trade, industry, handicrafts, division of labour, stratification of society, the growth of numerous guilds and the emergence of a leisured class who could favour fine arts and patronize craftsmen and artists alike. With all this change a well organized political administration also was considered essential for the proper functioning of these institutions and a strong agricultural hinterland became necessary for the support of the city.[58] Thus, economic factors seem to have played the most vital role in the growth of towns. M.C. Joshi also emphasises the role of economic activities in the growth of urbanisation. He feels that the distinctive feature of any urban settlement is the existence of monetary exchange system, rather than any other feature like script or monumental architecture.[59] Several other scholars also are keen in assigning an important place to the economic factor in the urban growth.[60]

The above discussion gives an idea of the nature of urbanization and the factors that might have influenced its growth. It also appears from the above that while some scholars consider social factor as responsible for the rise of urban centres, some others regard the economic factor as being the main stimulus to urbanization. However, the above discussion is not free from criticisms. The main lacuna lies in the fact that an isolated element has been greatly stressed, ignoring the importance of others in the growth of urbanization. It is true that these

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56. R.S. Sharma, "Material Background of the Origin of Buddhism", Mohitsen and M.B. Rao (ed.), *Das Kapital Centenary Volume—A Symposium*, Delhi 1968, p. 61; *IHR*, Vol. I, no. 1 (1974), p. 99; "Problems of Social Formations in Early India", *PIHC*, 1975, p. 9.
57. *Purātattva*, no. VI (1972), p. 33.
58. *Ibid.*, pp. 33-34.
59. *Ibid.*, p. 36B.
60. For similar other views see, Arnold Toynbee, *Cities on the Move*, London, 1970, p. 8; P. M. Hauser (ed.) *Urbanization in Asia and the Far East*, Calcutta, 1957, pp. 6-8; S.G. Checkband, *op.cit.*, pp. 352-53.

factors were largely responsible for the rise of towns, but either of the two was sufficient singly to transform a rural settlement into an urban one. It shall be wrong to assume that an isolated factor gave rise to towns. Unless the farmers produced surplus food, the state could not get taxes on which its existence depended. Similarly, in the absence of a well organised distribution system in the shape of state, there might be anarchy in which there could be no agriculture, no surplus. In the same way in the absence of merchants or even peddlars, the surplus could not be carried from one place to another, resulting in the economic stagnation. Thus each of the elements—social, political and economic—played their vital role in the growth of towns. Each worked as a complementary to another and prepared the ground for urban growth. Besides, geographical and religious considerations also influenced the course of urbanisation in ancient India.

Thus some of the important factors which seem to have influenced the urban growth were (a) increased food supply, (b) increasing population and/or rural unemployment, (c) craft specialization, (d) marketing and trade, (e) landlords, (f) administration, (g) defence, (h) religion, (i) secular tourism, (j) education and (k) retainers.[61] All these elements seem to have influenced the growth of Indian towns.

The surplus food production was one of the prerequisites for the urban growth. It enabled the villagers to get other manufactured articles of daily use, agricultural implements or other necesasry items in exchange or sale of grains to towns men. The towns men on their part did not bother to produce their own food, they depended on surplus and devoted their time in the pursuit of crafts, industries and trade. Thus a reciprocal relation between village and growing urban settlements was established. Each fulfilled the requirements of other and helped directly or indirectly to the growth of towns in ancient India. Similarly, the increasing number of population, who had no land of their own, began to shift to industrial or commercial places to work as apprentices in various crafts and industries as well as labourers. The *Jātakas* are replete with such stories where many apprentices were employed to give them training of varied crafts and industries. These later on helped the growth of industries and crafts and accelerated the process of urbanization.

The craft specialization and trade led to the growth of many industrial centres. Artisans and craftsmen began to unite in various guilds which looked after the business of their respective guilds. The guilds ensured the supply of raw materials to artisans and craftsmen as well as the consumption of finished goods and their profits to artisans. The guilds thus helped considerably the growth of specialized crafts and the number of towns. The merchants also added to the increase of towns. They carried the products of craftsmen and artisans from one part of their respective area to another and thus regularly supplied the requirements of artisans and craftsmen on the one hand and agriculturists and other people on the other. Numerous marketing centres arose which gradually became full-fledged towns. The Indian literature bears testimony to the fact how merchants supplied products of an area to another and kept the system of demand supply alive. In fact the role of merchants in the growth of towns comes only next to the increased food production.

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[61] Bruce Trigger, "Determinants of Urban Growth in Pre-industrial Societies", in *Man, Settlement and Urbanism*, pp. 577-94.

The landlords or big agricultural magnates also directly or indirectly furthered the growth of towns in India. Although attached to land, some of them liked to stay in towns because life there was easy going and luxurious. They controlled the economy of villages as well as towns. In villages their subordinates worked in fields and earned money for their master and in towns the landlords spent that money in trade or industries. Thus they earned profit from land as well as tradet and industry. They took every care to maintain their strongholds at both the places. The *Jātakas* often refer to rich merchants going to villages to collect revenue from their estates. However, we have no means to examine whether in India agricultural magnates lived in garrisoned towns in order to protect their property and lives against peasant uprisings, as was the case in ancient China.[62] We have very few references of peasants' oppression by landlords in ancient India and it seems that the main motive behind their residence in towns was that life was comparatively more comfortable and luxurious and their interest to earn money by spending money in trade and industries.

Administrative complexity led to the growth of administrative urban centres. From the later Vedic age, as the socio-economic structure grew complex, numerous royal officers began to be appointed mainly to collect the royal dues, and for the maintenance of peace and preservation of varṇa system. These officers generally stayed with kings in capitals. With the establishment of large territorial states in 6th century B.C., the number of such officers also increased considerably. It varied from royal messenger to ministers. Most of them lived in towns with the king and controlled the administration of the state. Thus capital cities grew. In the beginning almost all the big states had royal capital cities. But as the number of states increased the capital cities also grew enormously. Republican as well as monarchical states established their capital cities, which were centres of power.

The need for defending the royal capital required army and specialized persons to dig canals, erect defence walls and watchmen to look after the enemies. It was the fear of external and internal danger which compelled ancient Indian rulers to fortify the capital cities, employ army and other persons connected with the defence work. All such persons permanently resided in capitals and were supported by the state. They became a regular feature of cities and as their numbers increased the cities also grew.

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[62] *Ibid.*, p. 587.

Religion also influenced the growth of towns. In ancient India the places connected with Jainism and Buddhism, came to be regarded as sacred where large number of devotees congregated every year to express their faith. Thus most of the places associated with Buddha and Mahavira (e.g. Kapilavastu, Kuśīnārā, Sārnāth, Śrāvastī, Vaiśālī) became important towns. Mathurā was revered as much by the Buddhists as the Jains in early days. Buddhist *stupās* in large number were erected at such places. From the Gupta times temples also began to be constructed. The Buddhist *Saṁghas* or the Hindu temples provided job opportunity to a large number of people. The wealth accumulated in such religious centres also supported artisans and craftsmen who worked for the temple.

Similarly secular travel provided a livelihood for urban dwellers. Rest houses, *sarais* on main roads or in the vicinity of towns were established either by state, individuals or philanthropic institutions. These were used by ordinary travellers or merchants or royal officers and worked as ancilliary units of towns. Moreover, sometimes educational institutions of high repute also became famous as towns. Taxilā and Banāras are often mentioned in the *Jātakas* as centres of education where highly esteemed teachers resided and students from far off places came there for study. Later on Nālandā and Vikramśilā also became famous as university towns.

Apart from these, a great stimulus to towns came from retainers who provided personal service to others in lieu of money. Some of these were of utilitarian nature, while others less utilitarian, and served the needs of wealthy and luxurious persons. Consequently, cooks, household servants, singers, dancers, bards and other like people greatly increased the urban population. The number of such retainers depended on the prosperity of the city and hence they were greatly found in capitals and prosperous cities.

All these factors gave birth to towns in ancient India. It can be thus suggested that "a town or city comes into existence when a countryside produces enough food beyond its requirements to enable a group of people to live without growing their own crops or rearing their own livestock, and devote themselves to manufacturing articles for sale or performing other services for a hinterland. When these goods and services are relatively simple or are sold to the region lying immediately around the town, it is a market town. But it may produce a wider range of goods and sell them to a wider market, or perform more than the simplest services, and if so, we may call it a city.[63] We may also suggest that planned layout, regular roads and streets, public drains, fortifications, markets, temples, monasteries, residences of royalty and nobility, and above all, houses of a reasonable standard are some of the elements which should distinguish an ancient city.[64]

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63. A.H. Hourani (ed.) *The Islamic City—A Colloquium*, Bruno Cassirer, Oxford & University of Pennsylvania Press, 1970, p. 9.

64. Y. D. Sharma, *Archaeological Remains, Monuments and Museums*, Pts. I-II, Archaeological Survey of India, New Delhi, 1964, p. 44.

Apart from the features discussed above, some distinguishing characteristics of ancient towns may be suggested on the basis of archaeological material. They are as follows:—

(*a*) The area of excavated mounds should cover at least one square mile, suggesting thereby large population.

(*b*) Large baked brick structures constructed in planned manner should also be regarded as an important characteristic, for they can stand the moist climate of the Gangetic basin in contrast to unbaked brick constructions preserved in the dry climate of central Asia.

(*c*) A network of roads and streets, either metalled or unmetalled may indicate busy traffic, possible in urban centres only. Along with roads and streets, there should also be proper drainage system which might refer to the congested population and sanitary arrangements, both being generally absent in rural settlements.

(*d*) Finds of coins might indicate trade and commerce and those of coin moulds mint towns.

(*e*) The discovery of tools and implements like large furnaces, ovens, iron smelters, crucibles etc., for making iron and other implements, presuppose their use by artisans.

(*f*) Most of the ancient Indian towns (e.g. Hastināpura, Pāṭaliputra, Vārāṇasī, Kauśāmbī etc.) were situated on river banks. So, the existence of rivers or water routes by the excavated sites may also mean that they were towns. But where rivers or water routes lack, large number of wells and tanks may suggest the existence of dense population, because in rural settlements the population as well as wells and tanks are found in comparatively lesser number.[65]

However, the discovery of coins from any excavated site does not always imply it to be an urban site because coins, either singly or in hoards may be dicovered in villages also. Even in modern times the tendency of hoarding money in villages is not altogether lacking. The discovery of coins may almost suggest the penetration of money economy at the site. We may also suggest that where excavations fail to expose the remains of dwelling houses, an extensive area of thick and continuous habitation refuse may provide a basis for taking it to be an urban settlement.[66]

Problems Related to the Kuṣāṇa Urban Centres

These are some of the features which may help us in determining the urban character of any ancient settlement, but we have to consider certain other characteristics also which may be specifically applied to the Kuṣāṇa urban centres in India. Some of these may be the discovery of coin moulds, the existence of glass industry which attained maturity under the Kuṣāṇas, finds of iron crucibles, iron tools and implements, large brick structures, baked tiles for flooring, the existence of a large number of votive tanks,[67] ring-wells, red-ware and typical Kuṣāṇa pottery like sprinklers, long-necked jar, deep bowls, etc. All these features are to be examined at excavated sites, before deciding whether it was an urban centre during the Kuṣāṇa period.

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[65] R.S. Sharma, "Decay of Gangetic Towns in Gupta and post-Gupta Times", *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 92.

[66] P. Wheatley in *Man, Settlement and Urbanism*, p. 612.

Our main difficulty in the study of the Kuṣāṇa towns in India, is the paucity of clear sources. Literary sources, being sacerdotal in nature, do not enlighten us on the Kuṣāṇa towns. There is absolutely no reference to the Kuṣāṇa kings and their activities, except in some of the Chinese texts and the *Rājataraṅgiṇī* of Kalhaṇa. Moreover, the dates of the literary works are so uncertain that it is difficult to utilise them for any particular period of ancient Indian history. The contents of the texts also, as they deal mostly with the achievements of the Buddha, the spread of Buddhism and similar allied matters, are of no help to us in the reconstruction of the history of the Kuṣāṇa towns in India. Epigraphic evidence too does not help us much. It helps in the study of political ideas, but throws no light on the town administration under the Kuṣāṇas. The Kuṣāṇa coins, apart from attesting the economic prosperity of the land under them and some references on the titles of the kings, do not contain much information. They do not bear the names of the mint towns from which they were issued.

The archaeological excavations conducted at many sites in India and abroad give an idea of the urban settlements during the Kuṣāṇa period, but are deficient in many ways. In India, the excavations, which have been mostly of vertical nature, fail to give detailed and clear picture of any site. The limited excavations do not give complete idea of the material culture of any site during any particular period. Moreover, the cultural periods are demarcated so vaguely that there is always the possibility of overlapping from one period to another. Another difficulty is that the 'red were culture', generally assigned to the Śuṅga-Kuṣāṇa phase, is vague and not quite clear. Moreover, abnormal delay in the publication of excavation reports also poses a problem before us.

As regards the excavations carried outside India, till recently the main interest of the archaeologists there was to collect art pieces and not to study the growth of any site in right perspective. However, archaeology has made some progress in recent times, especially in U.S.S.R., where archaeologists have excavated complete town sites. This may enable us to form some idea about the Kuṣāṇa towns and these sites may work as models for Kuṣāṇa towns in India.

Archaeological excavations carried throughout a large part of northern India, Pakistan, Iran, Afghanistan and Soviet Central Asia indicate that the number of towns increased considerably under the Kuṣāṇas. However, all the Kuṣāṇa towns were not of the same category and they differed considerably from each other functionally. Some of these were capital cities, others industrial centres, while still others were market towns, trading ports, educational or religious centres. But in most cases it is difficult to distinguish the function of one Kuṣāṇa town from that of another. Mathurā, for example, was the eastern capital city of the Kuṣāṇas as well as an industrial and religious centre where largest numer of inscriptions have been found indicating it to be a religious, industrial and political centre under the Kuṣāṇas.

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[67] R.S. Sharma, *op. cit.*, p. 93.

The contemporary literary texts also mention different units of settlement which suggest functional variation in these units. Thus the *Aṅgavijjā*, a text originally compiled in the Kuṣāṇa period and substantially retouched during the Gupta age,[68] refers to *gāma*, *nigama* (banking town), *janapya* (district town), *paṭṭana* (emporium), *niveṣa* (encampment) and *khanḍavāra* (military encampment).[69] The *Mānasāra*, a text composed at the beginning of the Christian era,[70] refers to eight kinds of fortified cities. They are *Rājadhānīya Nagara* (royal), *Kevala Nagara* (ordinary, i.e., without the royal residence), *Pura*, *Nagari*, *Kheta*, *Kharvaṭa*, *Kubjaka* and *Paṭṭana*. Moreover, eight kinds of forts, *Śibira*, *Vāhinī-mukha*, *Sthānīya*, *Droṇaka*, *Saṁviddha*, *Kolaka*, *Nigama* and *Skandha Vāra*, are mentioned. Other types of forts are also mentioned.[71] The *Mānasāra* thus clearly makes out the functional variation of these types of urban settlements. Other texts like the *Kāmasūtra* of Vātsyāyana, composed about the middle of the 3rd century A.D.,[72] refers to *nagara*, *paṭṭana*, *kharavaṭa* and *mahatī* as the proper place for the residence of a *nāgaraka*, in the section dealing with the *Nāgaraka Vṛttam*.[73] The *Divyāvadāna*, compiled between A.D. 200 and 350[74] also mentions *grāma*, *nagara*, *nigama*, *karvaṭa* and *rājadhānī*[75] as units of settlement. Similarly the *Amarakośa* of Amar Siṁha, although a work of the 6th century A.D., gives the following words as synonyms of town or city : *pura*, *purī*, *nagarī*, *paṭṭana*, *puṭṭabhedana*, *sthānīya* and *nigama*. It adds that *Sakhā-nagara* is a town other than the *mūla nagara*.[76] Thus both literary and archaeological sources attest the existence of numerous urban settlements during the early centuries of the Christian era.

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[68] Muni Shri Punyavijayji (ed.) *Aṅgavijjā* Prakrit Text Society, Benāras, 1957, p. 94.

[69] *Ibid.*, p. 44. See also p. 48.

[70] P.K. Acharya, *Architecture of Mānasāra*, Oxford University Press, 1933, p. lix. However at another place the date of the *Mānasāra* is suggested as for 7th centuries A. D. see Subhadra Jha (tr.) *History of Indian Literature*.

[71] *Ibid.*, X. 39-43. See also 88-91. Vol. III, pt. II, Motilal Banarsidass, 1967, p. 609.

[72] H.C. Chakladar, *Social Life in Ancient India : Studies in Vātsyāyan's Kāmasūtra*, Greater India Society, Calcutta, 1929, p. 33. Winternitz and Keith take it to be a work of the 4-5 centuries A.D. respectively, see, Subhadra Jha, *op. cit.*, p. 624.

[73] Sri Devdutta Sastri (ed.) *The Kāmasūtraṁ of Vātsyāyan Muni*, The Kashi Sanskrit Series—29, Varanasi, 1964, IV. 2

[74] P.L. Vaidya (ed.) *Divyāvadāna*, Buddhist Sanskrit Text, No. 20, Mithila Institute of Post-Graduate Studies and Research in Sanskrit Learning, Darbhanga, 1959, p. xi.

[75] *Ibid.*, Kanakavarṇavadānaṁ, p. 181.

[76] *Amarakośa* II, 2, 1-2.

Several factors influenced the growth of Kuṣāṇa town in India. Most of the existing towns within the limits of the Kuṣāṇa empire came under the direct or indirect control of the Kuṣāṇas and flourished on account of economic prosperity which the period witnessed. Several new towns also sprang up as a consequence of developed trades, crafts and industries. Kuṣāṇa towns also grew as an effort of the Kuṣāṇa kings who established new cities. Although much evidence in this connection is not available, the *Rājataraṅgiṇī* of Kalhaṇa, however, a Kashmiri text of about the 12th century A.D., refers to three Turuṣka (Kuṣāṇa) kings who founded three cities after their names. According to this text, Huṣka, Juṣka and Kaniṣka built the towns of Huṣkapura. Juṣkapura and Kaniṣkapura. Juṣka is also said to have founded Jayasvāmīpura.[77]

The kings mentioned in the *Rājataraṅgiṇī* have been identified as Huviṣka, Vaśiṣka and Kaniṣka and the cities founded by them with Ushkur (inside the Barahmulla pass), Zukur (north of Śrī Nagar) and Kansipore (between Barahmulla and Śrī Nagar). Apart from the *Rājataraṅgiṇī* reference, we have no other evidence to corroborate the statement of Kalhaṇa. But the archaeological evidence, though meagre, may be taken to suggest the existence of these towns.[78] Elsewhere, we do not have any literary reference to suggest that towns or cities were founded by the Kuṣāṇas, though archaeological evidence suggests numerous new urban settlements flourishing in India during the Kuṣāṇa times.

The accelerated tempo of urban growth in the Kuṣāṇa period is not difficult to explain. The early centuries of the Christian era witnessed the birth and growth of the Kuṣāṇa empire, extending from Bihar in India to Central Asia, including the parts of Pakistan, Iran, Afghanistan and Soviet Central Asia. The Kuṣāṇas restored political stability in northern India which was destroyed by the disintegration of the Maurya empire, increased cultural contact with the western world and economic prosperity as a consequence of more established commercial links between India and other Asian countries. The progress in trade and commerce as well as the peace and security in the country gave a fillip to the urban process as is evident from archaeological excavations. The excavations have revealed the existence of more urban centres during the Kuṣāṇa times than in the earlier or the later periods.

Two important factors seem to have largely influenced the growth of Kuṣāṇa towns in India, i.e., territorial expansion, political stability and the economic prosperity of India as a result of brisk inland and foreign trade and increased knowledge of crafts and industries.

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[77] M.A. Stein, (tr.) *Kalhaṇa's Rājataraṅgiṇī*, Vol. I, Motilal Banarsidass (Reprint), 1961, I. 168-69.

[78] Although systematic excavation of these sites has not been done as yet, the discovery of coins, terracotta figurines and pottery at various sites in the valley of Jammu and Kashmir and the structural remains at Harawān, makes the possibility of the existence of these towns somewhat certain.

The Yue-chi tribe, to which the Kuṣāṇas belonged, originally spent a nomadic life on the fringes of the Chinese empire, but political and climatic conditions compelled them to move westward. The pressure of the consolidated Chinese empire under Shi Huang Ti, the builder of the Great Wall of China and the drying up of their pastures were important factors for their migration. After their migration they came into conflict with the Śakas, defeated them and moved up to the fertile region of Oxus. They soon became able to settle themselves in Bactria and Khwarezm.

Ta-hia (Bactria) had by now developed an urban culture and the Yu-echi took advantage of the weakness of these urban centres. *The History of the First Han Dynasty* records the conquest of Ta-hia by the Yue-chi tribes several times. The political condition of the region made the conquest of Bactria easier. The *History* informs us that "The Ta-hia had no sovereign or chief magistrate; each city (ville), each small town (bourgade), was governed by its magistrate. The people were weak and afraid of war. When the Yue-chi arrived, they submitted to them". Similarly, Seu-ma Ts'ien records that "The Ta-hia had no sovereign; each city, each town elected its chief. The soldiers were weak and cowardly in battle, only good for carrying on trade...[79] Perhaps emboldened by the weak state of affairs, lust of wealth, acquired by these towns through trade, and the strategic advantage which the garrisoned towns of Bactria could afford, the Yue-chi Chief Kui-Shuang or Kujula Kadphises, united the five divisions of the Yue-chi under him and became the master of Ta-hia. The *History of the First Han Dynasty* as well as the *History of the Second Han Dynasty* confirm the occupation of Ta-hia by Yue-chi and names Lan-cheu as their capital.[80]

The *Annals of the Second Han Dynasty* further records that Kujula Kadphises invaded *An-hsi* (Parthia or parts of the Indo-Parthian realm in Afghanistan), captured the district of Kao-fu (Kābul) and destroyed P'U-ta (possibly a district in Central Afghanistan) and Kipin (possibly Gandhāra and the lower Swat Valley). Kujula is said to have expired at an advanced age of eighty.[81] Thus it was Kujula Kadphises who founded the Kuṣāṇa empire at the cost of the Bactrian Greeks and Indo-Parthians. Most probably, Gāndhāra and Taxilā also were brought under his dominion. This is evident from the discovery of a large number of coins belonging to Kujula Kadphises at Sirkap. The Kuṣāṇa hold over these places might have been consolidated by his son Wema Kadphises, but the initial conquest was made by Kujula himself.[82]

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[79] Sylvain Levi, "Notes on the Indo-Scythians", *IA*, Vol. XXXII (1903), p. 418.

[80] *Ibid.*, Lan-cheu has been identified with Puṣkalāvatī in Pakistan. See, *ibid.*, p. 423.

[81] *Ibid.*, p. 417.

[82] More than 2,500 coins of Kujula Kadphises were discovered at Taxilā (Sirkap). See, John Marshall, *Taxilā, I*, Vārāṇasī, 1975 (Reprint), p. 67; *Taxilā II*, p. 785.

Wema Kadphises, who succeeded his father Kujula Kadphises, aggrandised the extent of the empire further. The *Annals of the Second Han Dynasty* states that "Yen-kao-tehin ascended the throne; he conquered T'en-tchou (India) and appointed generals there, who governed in the name of the Yue-tchi".[83] The king mentioned in the *Annals* was evidently Wema Kadphises. It was probably Wema who consolidated his hold over Gāndhāra and Taxilā. Moreover, the Pañjtar stone inscription, dated year 122 and the Taxila silver scroll inscription of the year 136,[84] suggest that the Kuṣāṇas had consolidated their position in north-western India. It has been suggested that Wema Kadphise's empire most probably extended from Banaras in the east to the frontiers of Parthia and included the whole of Afghanistan, Turkestan, Bukhara and parts of Russian Turkestan.[85]

After a brief interlude Kaniṣka, one of the most powerful and famous kings which the early centuries of the Christian era produced, became the king of the Kuṣāṇas. He ascended the throne most likely in A.D. 78 and further extended the limits of the Kuṣāṇa empire. The find spots of his inscriptions dated in the year 1 at Peshāwar, 2 at Kośam, 3 at Sārnāth, 4 to 23 at Mathurā, 11 at Suivihār (Bhawalpur) and Zeda (und), 18 at Maṇikiāla (Rawalpindi) may be taken to suggest the Kuṣāṇa emperor's hold over the territories as far as Banaras in the east and Bahawalpur in the south-west.[86] Thus the find spots of his inscriptions make it clear that his empire included Uttar Pradesh, Punjab, North-west Province, and Northern Sind. The Sānchī Museum inscription of the year 22, makes the possibility of Malwa in South, having formed part of the empire where Vaśiṣka worked as one of the Viceroys of Kaniṣka. S. Levi suggests that the sway of Kaniṣka also extended over the North-Western part of the Deccan.[87]

Besides epigraphic records, literary sources and numismatic evidence also give an idea about the vast extent of the Kuṣāṇa empire under Kaniṣka. The *Rājatara-*

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[83] *IA*, Vol. XXXII (1903), p. 417.

[84] *SI*, nos. 32, 34; *CII*, XXVI-XXVIII.

[85] B.N. Puri, *India under the Kuṣāṇas*, Bombay, 1965, p. 26. There is some reason to believe that Wema had considerably extended his empire. The discovery of his coins at Begram, Peshāwar, Taxilā, Kalka-Kajauli road, Mathurā, Gopālpura Stūpa (Gorakhpur district), Bhiṭā, Vārāṇasi, Indore, and of his military governors as far as Ghazipur and Saurāṣṭra, Kumrahār and Buxar in Bihar, suggest the inclusion of these areas under his control. Moreover, it appears from the *Periplus* that there existed a brisk commercial intercourse with Rome through the city of Ujjain and port of Barygaza. It also appears that the trade routes running from Kābul to Mathurā, Pāṭaliputra to Mathurā, Mathurā to Barygaza via Ujjain were completely safe for trade. This was possible only when all these routes were either under the direct control of a strong ruler or his allies who maintained peace in the area. It may be suggested that the ruler who controlled these trade routes was no other than Wema Kadphises. See, Baldev Kumar, *The Early Kuṣāṇas*, Sterling Publishers, Delhi, 1973, p. 42.

[86] B. Chattopadhaya, *Kuṣāṇa State and Indian Society*, Calcutta, 1970, p. 30.

[87] Sudhakar Chattopadhyaya, *Early History of North India*, Motilal Banarsidass, 3rd revised edition, 1976, p. 102. B.N. Mukherjee also suggests that the period of Kaniṣka I witnessed the beginning of the Kuṣāṇa thrust towards the Deccan. See, B.N. Mukherjee, *Kaniska I and the Deccun*, Pilgrim Publishers, Calcutta, 1968, p. 109.

ṅgiṇī of Kalhaṇa credits Kaniṣka with building a city called Kaniṣkapura. From the accounts of the Chinese pilgrim Huen-Tsang, it becomes clear that Kashmir formed a part of Kaniṣka's kingdom. The fourth Buddhist council was convened under the patronage of Kaniṣka at Kundalvana Vihāra in Kashmir.[88]

Although the epigraphic evidence suggests the easternmost expansion of the empire up to Sārnāth near Banāras, literary and numismatic evidence indicates the extension of the empire beyond Banāras. Most probably Magadha also was conquered by Kaniṣka. The Chinese biography of Aśvaghoṣa (Ma-ming-pou-sa-tchoen) relates that the king of the Yue-chi invaded Magadha to demand the Buddha's bowl and Aśvaghoṣa, but the biographer does not name the invader.[89] Most probably the invader was Kaniṣka who conquered Magadha. The Kuṣāṇa occupation of Pāṭaliputra is also confirmed by archaeological excavations. Moreover, Kuṣāṇa coins along with other antiquities have been reported from sites like Vaiśālī, Chirānd, Sonepur, Buxar and other places in Bihar. All this points to the fact that the Kuṣāṇa dominion extended up to Bihar.[90] It has also been suggested that Kaniṣka possibly conquered some part of West Bengal also, but the evidence is very tenuous to support any such hypothesis.[91] Thus the Kuṣāṇa empire under Kaniṣka was very extensive and extended from central Asia to Bihar in India, including the parts of the Deccan and Kashmir.

Huviṣka successfully maintained the Kuṣāṇa hold over the entire area from the Oxus to the Gangetic valley, though no record of this king has come to light beyond Mathurā. However, two epigraphs from Mathurā, dated in the years 28 and 47 record the donations made by Bakanpati (lord of Wakhan) and monk Jivaka, a native of Udiyana. These two records suggest the control of Huviṣka at these places. Moreover, the Arā stone inscription of the year 41 shows that the

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[88] It is very likely that Harwan near Shalimar garden, where a *stūpa* and monastery belonging to the early centuries of the Christian era have been exposed, represents the site of the Kuṇḍalavana Vihāra. Rosenfield, however, suggests that perhaps Harwan is the remains of the sanctuary Sadarhādvana. See, *The Dynastic Arts of the Kuṣāṇās,* University of Berkeley and Los Angeles, 1967, p. 289, fn. 102. For an account of the excavations at Harwan see, R. Kak, *Ancient Monuments of Kashmir*, London, 1933, pp. 105-11.

[89] *IA*, XXXII (1903), p. 383. However, the *Śrī-Dharmapiṭaka-Sampradāya-nidāna* (Fou-fa-tsanginiuen-tch'oen) preserves a story where we are told that "the total number of men in the town of Hoa-Cheu (Pāṭaliputra) was nine hundred thousand. The king of the kingdom of Yue-chi, Tchentanki-nitcha (devaputra Kaniṣka) equipped the 'four forces', came to Hoa-cheu, and in a battle defeated its king, who made his submission. The conqueror demanded nine-hundred thousand gold pieces. Then the king of Hoa-cheu, considering that M-ming, the Buddha's wooden bowl, and a naturally compassionate cook, which would not drink water containing insects, were each worth three thousand pieces, offered the three to kini-tcha, who accepted them joyfully and returned to his kingdom. *Ibid.*, p. 387. This story unmistakably suggests that Kaniṣka invaded the Magadhan capital and conquered it.

[90] For details regarding Kuṣāṇa extension in Bihar, see *JOIB*, Vol. IX (1959-60), pp. 49-52; *INC*, Vol. X, pts. I-II (1972), pp. 19-32; *PIHC*, XXXV session, Jadavpur (Calcutta), 1974, pp. 44-50.

[91] S. Chattopadhyaya, *op. cit.*, pp. 101-2.

Kuṣāṇas still held control over North-West Frontier Provinces of India. The Surkhkotal inscription, dated year 31 and the Wardak vase inscription of the year 51 prove the inclusion of Afghanistan in the Kuṣāṇa empire.[92] Kashmir also formed a part of the empire as Huviṣka is said to have founded the town of Huviṣkapur, according to the *Rājataraṅgiṇī*.

The last great king of the Kuṣāṇas was Vāsudeva who ruled from A.D. 142 to A.D. 176. By this time the empire was weakening gradually, though Vāsudeva was able to maintain his hold over parts of Afghanistan, Pakistan, Panjab and the area lying between Panjab and Mathurā. Vāsudeva was defeated by a Persian king, belonging to the Sassanian dynasty who reduced the Kuṣāṇas to the position of vassals. However, the Kuṣāṇas continued to rule over some parts of the North-West Frontier Province and Panjab for several years under the name of the Kidāra Kuṣāṇa or the little Kuṣāṇas.

Thus different stages are noticed in the growth of the Kuṣāṇa power. First of all, they consolidated their power in Bactria which offered them a sound base for future expansion. Secondly, by following a policy of aggrandisement, they began to rule India proper by the later half of the 2nd century of the Christian era. During the final stage, their power reached the zenith. They exercised supremacy over Central Asia, including the parts of the Tarim basin, almost all over northern India and as far south as Mālwā in the Vindhya region. Within the area thus specified, there flourished numerous ancient and prosperous towns, e.g., Taxilā, Mathurā, Banāras, Kauśāmbī, Śrāvastī, Pāṭaliputra and many others. All such towns came within the Kuṣāṇa empire as a consequence of the expansion of the Kuṣāṇa empire. These towns flourished on account of internal peace and economic prosperity which the period witnessed.

One of the important factors responsible for a sound economic condition of the period was the growth of numerous industries and crafts to meet the increasing demand of urban as well as rural population. Both the literary and archaeological evidence attest the existence of many such crafts. The *Aṅgavijjā*, contains a list of nearly forty-five kinds of professionals which included trader (*vavahārīn*), naval architect (*udakavaddhakī*), goldsmith (*suvaṇṇakāra*), ironsmith (*lohākāra*), bronzesmith (*kaṃsakāraka*), dyer (*suddharajaka*) and perfumer (*gaṅdhakī*). Besides, there are also mentioned nearly eight types of such professionals who earned their livelihood by tongue, sixteen types of metal workers, eleven classes of merchants, three types of weavers, six types of physicians and eight types of illusionists.[93] Other contemporary works like the *Lalitavistara*, the *Milindapañho*, the *Buddhacarita*, the *Saundarānanda*, etc. also give an idea about the various crafts which flourished during the period.

Morever, there are nearly two identical passages in the *Mahāvastu* (III.112-114 and III.442-443), a Buddhist work of about 2nd century A.D., which provides a list of various artisans, craftsmen and guilds of traders and manufacturers. The said passage refers to three categories of professionals, the *Gaṅdharvikās* (musicians and players on various musical instruments), the *Śreṇīs* (the corporate bodies of traders of guilds of industrial manufacturers), and the *Śilpāyatanas* (the artisans and craftsmen). Thus the *Mahāvastu* list containing one hundred and one items, gives an idea about the economic prosperity of India during the early centuries of the Christian era.[94] Several epigraphs of the Kuṣāṇa period bear testimony to the fact that many industries mentioned in the literary texts really flourished under the Kuṣāṇas. The antiquities unearthed at several urban sites from the Kuṣāṇa layers have revealed the prosperous economic condition of these sites. The structural and materials remains in the shape of pottery, bricks, beads, metal objects, glass and working in precious and semi-precious stones point to the same direction.

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[92] Bhaskar Chattopadhyaya, *op. cit.*, p. 32.

[93] *Ibid.*, pp. 47-48.

Another factor, facilitating the growth of the Kuṣāṇa towns in India, was the flourishing inland and foreign trade during the period. Contemporary Indian and non-Indian literature indicates the movement of traders and merchandise from one part of the country to the other. Indications of foreign trade during the period are also available. The improvement in the communication system gave a fillip to trade which was carried through land as well as water routes. The land routes generally passed along the river valleys, coasts, important towns and mountain passes. Trade routes connected almost the whole of India and some of them even led to Western and Central Asia. The discovery of monsoon by Hippalus in around A.D. 46-47 reduced the distance between the west Asian ports and made the mid-ocean navigation *via* the Arabian Sea possible.

Other factors which helped the growth of trade during the Kuṣāṇa times were the opening of overland route of commerce between India and the Roman empire. The consolidation of the Kuṣāṇa empire, stretching from Bactria to the Gangetic Valley provided a congenial atmosphere for a regular trade between the Eupharates and the Gaṅgā basins. The rise of the Roman empire as a mighty power in the western world also affected Indian trade favourably from the 1st century B.C. onwards, because of the growing demand of Indian luxury goods like muslin, silk and precious stones in the eastern part of the Roman empire.[95] It has also been suggested that the peace treaty signed in A.D. 63 between Rome and Parthia proved very beneficial for the commercial transaction between India and the Roman empire.[96] Moreover, the Roman occupation of Egypt and efforts made by Augustus to ensure peace in the Mediterranean region facilitated smooth transactions between India and the western world for the next few centuries.[97]

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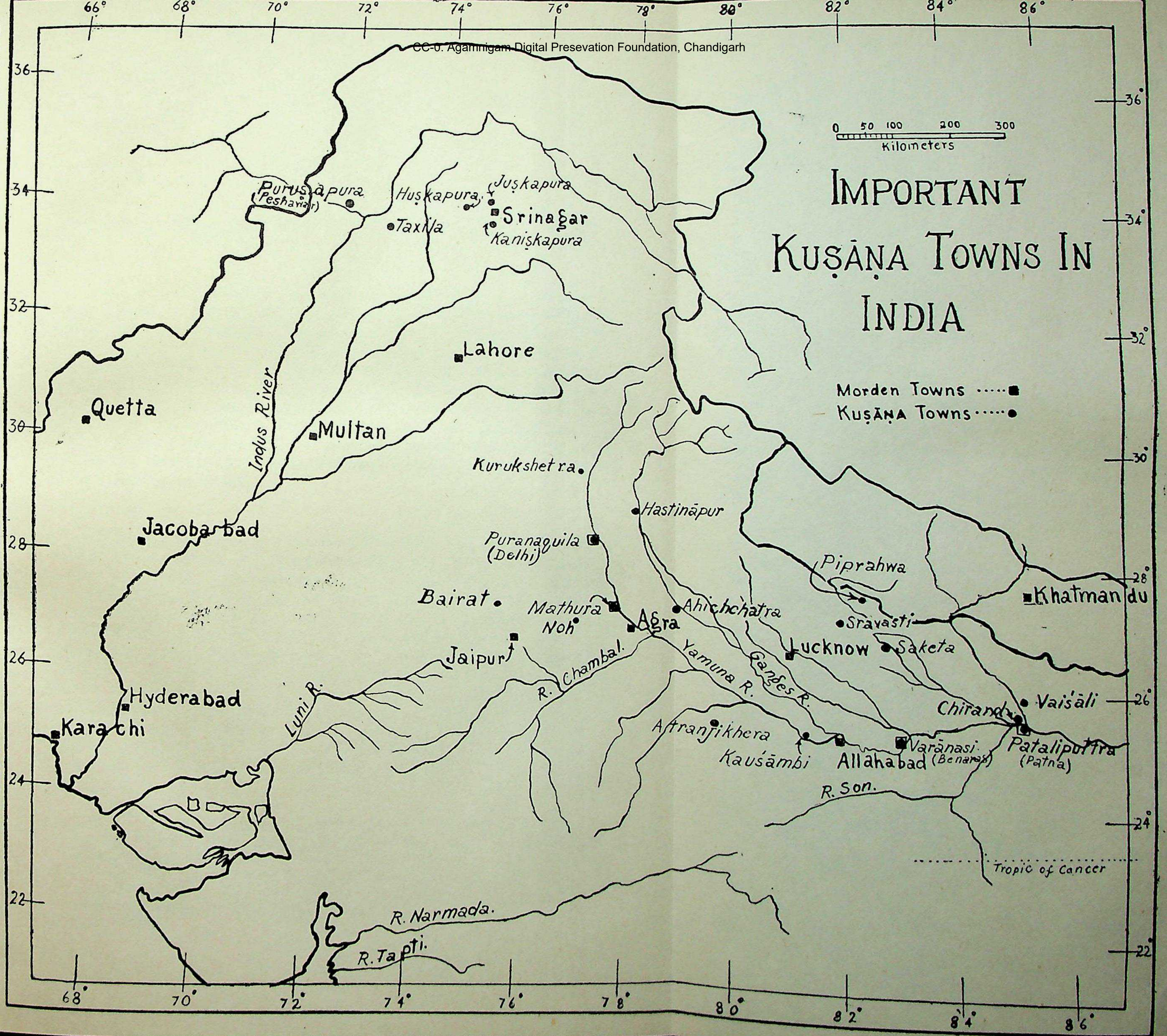
94. R. Basak, "Indian Life as Revealed in the Buddhist Work, the *Mahāvastu-Avadāna*", *J. N. Banerjee Volume*, Calcutta, 1960, pp. 36-41. However, a close scrutiny of the two passages reveals that they are not quite identical. For details see, J.J. Jones (Translated), *The Mahāvastu*, Vol. III, Sacred Books of the Buddhists Series, Vols. XVI-XVIII.
95. *Ibid.*, pp. 81-82.
96. Baldev Kumar, *op. cit.*, p. 198.
97. G.L. Adhya, *Early Indian Economics*, Asia Publishing House, 1966, p. 129.

The growth of money economy on an unprecendented scale in the Kuṣāṇa period has its effects on the development of trade also. The Kuṣāṇas issued for the first time a large number of gold and copper coins. Their coins have been discovered from Panjab, U.P., Bihar, Bengal, and Orissa. These range from the time of Kujula Kadphises to that of the Kidāra Kuṣāṇas. Some coin moulds of the Kuṣāṇa period have also been discovered. The discovery of a large number of coins from such a wide area implies the general circulation of the Kuṣāṇa coins. Copper coins were minted for general circulation whereas gold coins, minted after the fashion of Roman coins, were possibly used as standard foreign exchange. The wide circulation of coins indicates the deep penetration of money economy into the common life of people. It further worked as a stimulus to trade and the consequent growth of towns in the Kuṣāṇa period.

Thus political and economic factors seem to have largely influenced the growth of Kuṣāṇa towns in India. The Kuṣāṇa had come from an area where urban culture had already grown up. They had taken the full advantage of the Bactrian towns, realized its importance in economic and political life. Born and brought up in an urban culture they took every care to promote the growth of towns in India during their political supremacy in India.



IMPORTANT KUṢĀṆA TOWNS IN INDIA

66°
68°
70°
72°
74°
76°
78°
80°
82°
84°
86°
36
34
32
30
28
26
24
22
0 50 100 200 300
Kilometers
Morden Towns ······ ■
KUṢĀṆA Towns ······ ●
Puruṣapura (Peshawar)
Huṣkapura
Juṣkapura
Srinagar
Kaniṣkapura
Taxila
Lahore
Quetta
Multan
Indus River
Kurukshetra
Hastināpur
Jacobabad
Puranaquila (Delhi)
Piprahwa
Khatmandu
Bairat
Mathura
Noh
Agra
Ahichchatra
Srāvasti
Saketa
Lucknow
Jaipur
R. Chambal.
Yamuna R.
Ganges R.
Hyderabad
Luni R.
Vaiśāli
Chirand
Karachi
Atranjikhera
Kauśāmbi
Allahabad
Vārānasi (Benaras)
Pataliputra (Patna)
R. Son.
Tropic of Cancer
R. Narmada.
R. Tapti.

CHAPTER TWO

THE LOCATION OF THE KUṢĀṆA TOWNS IN INDIA

THE EXISTENCE and development of many old and new towns is attested by literary as well as archaeological sources. Even where literature is reticent, the archaeological excavations suggest the prevalence of many towns during Kuṣāṇa times, not only in the Indo-Pakistan sub-continent, but also in Afghanistan, Iran and the Soviet Central Asia. The Soviet archaeologists have done a commendable work in laying bare the complete planning of the Kuṣāṇa towns in Central Asia. But unfortunately, archaeology in our country has not advanced to a high degree of perfection and extensive horizontal diggings have not been developed. The vertical diggings in India fail to give a complete and real picture of the towns. Nevertheless, archeological material corroborated by literary texts gives a fair idea of the Kuṣāṇa towns in India.

I. The North-West

Puṣkalāvatī, the traditional metropolis of Gāndhāra, was one of the earliest Kuṣāṇa cities in Pakistan. The natural resources of the region, its strategic and commercial position largely contributed to the growth of this city in early times. The ancient city has been identified with modern Chārsada.[1] The place is situated on the east bank of the river Swat, nearly 4 miles to the north-west of its confluence with the Kabul river and approximately in the centre of the Peshāwar valley.[2] The geographical setting of this city gave it an economic importance. Like Taxilā, Puṣkalāvatī also stood at the very gate to India from the north-west. It was situated at the junction of important land-routes and easily accessible by the river route as well. It was perhaps due to this advantageous position that Puṣkalāvatī prospered as a mart as well as a metropolis. In fact, the commanding position of Chārsada in trade routes through the mountain passes to the west and north as well as the natural resources of the land, amply explain the origin and growth of an ancient town here.[3]

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[1] *ASIR*, Cunningham, XIX, p. 92. See also *ASI—AR*, 1902-3, p. 142; Wheeler, *Chārsada*, p. 2; B.C. Law, *Prāchīn Bhārata Kā Itihāsik Bhoogol* (in Hindi), p. 201; V. K. Mathur, *Itihāsik Sthānāwali*, Ministry of Education, Government of India, 1969, p. 572.

[2] *ASI—AR*, 1902-3, p. 144 [Wheeler, however, places it 3 miles from its present junction with the Kābul river and 20 miles north-west of Peshāwar. See M. Wheeler, *Chārsada*, O.U.P., 1962. This indicates that the river has changed its course by a mile.]

[3] *Ibid.*, pp. 144-145.

The antiquity of Puṣkalāvatī can be traced back to the *Rāmāyaṇa* where it finds mention. But this city shot into prominence with the campaigns of Alexander in India. With the spread of Buddhism in the Gāndhāra region it acquired the status of first city in the trans-Indus region.[4] Tradition asserts that this city was named after Puṣkara, the son of Bharata and the nephew of Rāma. The Greek version of Puṣkalāvatī is Peukelaotis or Peucolaitis, derived from Pālī Pukkalaoti or Sanskrit Puṣkalāvatī.[5] It has been suggested that the term Proklais which occurs in Arrian's *Periplus of the Erythraean Sea* and Ptolemy's *Geography* is an attempt to give the Hindu name of Pokhara instead of Puṣkara.[6]

The archaeological excavations at Chārsada have brought to light evidence to suggest the Kuṣāṇa occupation of this city, though for a short time. The excavations of 1902-3 revealed Kuṣāṇa coins at Mir Ziyarat, belonging to Wema Kadphises (one) and Kaniṣka (three).[7] Similarly a copper coin belonging to one of Kadphises was discovered at Palaṭudherī.[8] Moreover, a hoard of 57 copper coins of the late Kuṣāṇa period was also reported from the site.[9] Apart from the numismatic evidence, structural as well as epigraphic evidence also tend to suggest the Kuṣāṇa hold over this city. Here, some structures, belonging to the time of Kaniṣka or later period were exposed.[10] Further, four inscribed jars, three of these bearing Kharoṣṭhī inscriptions in the Kuṣāṇa character, were found.[11] Thus, numismatic, architectural as well as epigraphic materials from Chārsada strongly suggest it to be a flourishing town in the Kuṣāṇa period.

The main habitational area of Chārsada during the Kuṣāṇa times was outside the Bālā Hisār, at a place called Shaikhan Dherī, about 3 furlongs to the north-northwest, between the arms of two rivulets, Sambor and Zinde, which represent the second city of Puṣkalāvatī. This has been excavated by A.H. Dani and has thrown additional light on ancient Puṣkalāvatī under Kuṣāṇa occupation. The excavations at Shaikhan Dherī, the site of the old city of Puskalāvatī, has exposed three occupational layers belonging to the Kuṣāṇa, Scytho-Parthian and Greek times.[12] These three phases have been further sub-divided into three periods on the basis of coins. Thus the Kuṣāṇa phase embraced three sub-phases : Period I (Late Kuṣāṇa) belonged to the time of Vāsudeva; Period II (Middle Kuṣāṇa) to the time of Kaniṣka and Huviṣka while Period III (Early Kuṣāṇa) can be traced back to the time of Soter Megas, Wema Kadphises and Kujula Kadphises.[13]

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[4] *Ibid.*, p. 143.

[5] Alexander Cunningham, *The Ancient Geography of India*, (1871), Vārāṇasī, 1975 (Reprint), p. 42.

[6] *Ibid.* (Cunningham is, however, wrong in saying that the *Periplus of the Erythraean Sea* is a work of Arrian).

[7] *ASI—AR*, 1902-3, p. 159.

[8] *Ibid.*, p. 160.

[9] *Ibid.*, p. 172.

[10] *Ibid.*, p. 160.

[11] *Ibid.*, pp. 163-64.

[12] *AP*, Vol. II, 1965-66, p. 23.

[13] *Ibid.*, pp. 24-25.

The material from these layers includes several structures of burnt bricks, coins, pottery, terracotta figurines, sculptural pieces, beads of semi-precious stones as well as iron objects, various items of toilets etc. The nature of the excavated material from the site strongly suggests it to be a Kuṣāṇa town. The burnt brick structures with a regular planning of streets, drains, refuge, pits, bathing place as well as fire place[14] make us believe it to be the remains of an ancient town. Moreover, the site also yielded a total number of 219 Kuṣāṇa coins. Out of these coins, 5 belonged to Kujula Kadphises, 60 to Wema Kadphises, 38 to Soter Megas, an unidentified king, 77 to Kaniṣka, 31 to Huviṣka and 8 to Vāsudeva.[15] One of the interesting discoveries in this category was a gold coin of Wema Kadphises which was used as a button.[16] It may be pointed out here that three gold *talismans*, imitating the Kuṣāṇa coins were discovered in Bihar also.[17] The imitation of Kuṣāṇa coins as *talismans* and buttons suggests the penetrating influence of these rulers on the inhabitants of these areas. This could not be possible unless the people were well familiar with the Kuṣāṇas. This gives further weight to the fact that Puṣkalāvatī was a town during the Kuṣāṇa period.* The coins mentioned above also indicate that Shaikhan Dherī remained in Kuṣāṇa occupation from the time of Kujula Kadphises to Vāsudeva. Since the coins of Vāsudeva are fewer in number and of cruder variety[18] it may be taken to suggest that from the time of this ruler the Kuṣāṇa hold over Shaikhan Dherī or Puṣkalāvatī began to diminish gradually.

Apart from the numismatic and other materials discussed above, the excavations at Shaikhan Dherī brought forth nearly 37 Kharoṣṭhī inscriptions, almost all belonging to the Kuṣāṇa period. All these inscriptions are private records of religious nature and have nothing to do with the Kuṣāṇa kings.[19] The absence of royal records from the capital of the Kuṣāṇa empire itself may seem somewhat strange at first sight, especially because we have a large number of Kuṣāṇa inscriptions, mentioning the names of the ruling kings and their regnal years, discovered from the various parts of the far-flung empire.

Puruṣapura was another important Kuṣāṇa town in the Gandhāra region. Both the Chinese pilgrims, Fa-hsien and Hsuan-Tsang visited this place and spoke

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14. *Ibid.*, pp. 24-27. For details of structures see ch. III.
15. *Ibid.*, p. 35.
16. *Ibid.*, p. 37.
17. A.S. Altekar and Vijayakant Mishra, *Report on Kumrahār Excavations* (1951-55), Patna, 1959, p. 131.
18. *AP*, Vol. II, 1965-66, p. 38.
19. *Ibid.*, p. 109.

* The fashion of using coins as *talismāns* and buttons continues even now. I have seen many persons wearing like a garland and coins of Queen Victoria and George IV in villages. These days the fashion of using coins of 25 or 20 paise as buttons among the lads of towns can be noticed anywhere.

highly of it as a Buddhist centre. Fa-hsien noticed that this place (Fo-leu-sha) was famous for Buddha's alms bowl which had been brought by Kaniṣka from Pāṭaliputra as well as the splendid stūpa built here by that king.[20] Later on Hsuan-Tsang also visited this place and termed it as Po-lu-sha-po-lo. He also noticed here the "tower of the Patra of Buddha and the stūpa built by Kaniṣka-rājā".[21] The Chinese accounts alone thus, suggest that Puruṣopura was still traditionally associated with the Kuṣānas when they visited this place.

The modern name of Peshawar was given to it by Akbar, the great Mughal emperor, who changed its name from Parashāwar to Peshawar, meaning the "frontier town."[22] However, some controversy prevails about the place being regarded as the capital of the Kuṣāṇas. B.N. Mukherjee thinks, that the expression "Kaniṣkapure nagare" in the Shāh-jī-kī-dherī inscription, discovered from the Ganjgate of Peshāwar, refers to Puruṣapur.[23] B.N. Puri has also suggested that Purusapur was the capital of the north-western provinces of Kaniṣka's empire.[24] D.C. Sircar agreed with the earlier view and did not see any reason to doubt that Pusuṣapur was not the capital of Kaniṣka's empire.[25] A.H. Dani, however, does not agree with these views and thinks that the capital of the Gāndhāra region continued to be Puṣkalāvatī even during the days of the imperial Kuṣāṇas. It was only during the time of the Little Kuṣānas (Later ?) that the capital was transferred to Puruṣapur. The shifting of capital took place due to a change in the course of the rivers.[26] The excavations at Shaikhan Dherī have brought to light valuable materials which unmistakably suggest the Kuṣāṇa occupation of the city of Puṣkalāvatī for a long time, right from the time of Kujula Kadphises to that of Vāsudeva. On the other hand, there is no evidence to suggest the occupation of this city during the time of the Little Kuṣāṇas (Kidāra Kuṣāṇa ?). Unfortunately no systematic archaeological work has been done at Peshāwar or ancient Puruṣapur. Dani also suggests the existence of another important Kuṣāṇa city at Rājar (Rajagadha) near Chārsada,[27] but details are not available.

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[20] James Legge, *The Travels of Fa-hsien,* Delhi (Reprint) 1971, ch. X, pp. 33-35.

[21] S. Beal, *The Life of Hsuan-Tsang by Shaman HwuiLi,* Delhi, 1973, p. 63.

[22] Cunningham, *op. cit.*, p. 66.

[23] B.N. Mukherjee, "Shah-ji-ki-Dheri Casket Inscription", *The British Museum Quarterly,* Vol. XXVIII, 1964, pp. 39-46. See also, A.H. Dani, F. Khan, "Kuṣāṇa Civilization in Pakistan", *Central Asia in the Kuṣāṇa Period.* (Proceedings of the International Conference on the History Archaeology and Culture of Central Asia in the Kuṣāṇa Period, Dushanbe, September 27-October 6, 1968, published by the Committee on the Study of Civilization of Central Asia of the Commission of the USSR for UNESCO), 1974, Vol. I, p. 181. Mukherjee, however, in a recent paper suggests that the Chinese sources indicate that the capital of the kingdom of the Kuṣāṇas was Lan-Shin (in Ta-hsia) or at Bahl or Balk in Bactria immediately before their fall. B.N. Mukherjee, "New Trends in the Study of the History of the Kuṣāṇa Empire", typed paper distributed at the Seminar of *Refresher Course for Post-Graduate Teaching in History for Teachers in Eastern India,* Patna University, February 1977, pp. 10-11,

[24] *CAKP*, Vol. I, p. 181.

[25] *Ibid.*

[26] *Ibid.*

[27] *Ibid.*, p. 97.

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Another important Kuṣāṇa town was Taxilā, now situated in Pakistan. The excavations carried on at the site during the last fifty years have brought to light important remains of the Kuṣāṇa period in the shape of structures, inscriptions, art-pieces, typical Kuṣāṇa pottery, terracotta figurines, beads of semi-precious stones as well of terracotta, several household utensils and above all numerous Kuṣāṇa coins which attest the Kuṣāṇa occupation of the city.

Taxilā was one of the earliest and famous cities of ancient India. The place is mentioned in the Epics and the Buddhist literature. In the *Jātakas* it is invariably mentioned as an important educational centre where teachers of international repute resided. The students were imparted here education in all the branches of science as well as arts.[28] Taxilā was 2000 leagues away from Benāras, another important ancient city.[29] The *Mahāvastu* refers to the story of a merchant Vajrasena, dealing in horses who used to go to Benāras from Taxilā to sell his horses.[30] In the Jaina texts Taxilā is mentioned as the capital of Bāhalī and is said to have been frequented by Usabha.[31] These and several other literary references point to the economic as well as cultural importance of Taxilā in ancient India. However, the archaeological remains of the site, as discovered by excavations, do not push the antiquity of this famous city beyond the 6th century B.C. or thereabout.[32]

The ancient site of Taxilā was identified by Cunningham with the mounds of Shāhdherī, nearly one mile north-east of Kāla-kā-Sarai, in the district of Rawalpindi.[33] The place is situated at a distance of nearly 20 miles, north-west of the modern city of Rawalpindi. The prosperity of this city owed to many factors. Firstly, it was the junction of three important trade routes: the "royal highway" of Megasthenes, running from Pāṭaliputra to Taxilā, the route to western Asia and the third linking it up to Central Asia *via* Kashmir.[34] It was through these trade routes that the bulk of the trade was carried between India, Central and Western Asia. Therefore the fortunes of the city of Taxilā were linked up with the increase and decline in the volume of trade. Another important factor which helped considerably the growth of this city was the natural advantage which it enjoyed. The fertility of the soil, rich harvests, abundance of streams and fountains, and the pleasant climate of the place drew the attention of the classical writers like Arrian, Strabo, Plutarch and the Chinese pilgrim Hsuan-Tsang who all describe it most eloquently.[35] The fertility of the land enabled the people to produce enough surplus to support the city of Taxilā. The streams and fountains supplied water for irrigation as well as general consumption. A ring of hills round it accorded a safe

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28. *Jātaka*, Vol. I, no. 50; Vol. II, nos. 151, 175, 180, 181, 200, 211, 214, 222; Vol. III, nos. 313, 319, 323, 328, 336, 337, 338; Vol. IV, nos. 440, 445, 453, 456, 467; Vol. V, nos. 522, 524, 527 etc.
29. *Ibid.*, Vol. I, no. 96; Vol. II, no. 163.
30. *Mahāvastu*, II, p. 162.
31. J.C. Jain, *Life in Ancient India As Depicted In The Jain Canons*, Bombay, 1947, p. 341.
32. Marshall, *Taxilā*, I, Bharatiya Publishing House, Varanasi, 1975 (Reprint), p. 11. See also Marshall, *A Guide To Taxilā* Delhi, 1936.
33. Cunningham, *op. cit.*, p. 89.
34. Marshall, *op. cit.*, p. 1.
35. *Ibid.*, p. 2.

strategic status. Moreover, the rocks and pebbles supplied the best building material and also provided opportunities to the people to undertake various industries associated with stone. Thus the location of Taxilā facilitated the origin and growth of one of the most prosperous cities of ancient India.

Within an area of 3½ miles three separate city sites have been excavated, each with its own distinctive characteristics. Of these the Bhīr Mound, representing the oldest urban settlement at Taxilā, came into habitation some centuries prior to the arrival of the Greeks in the Gandhāra. However, it was not a well laid out town. Its planning was very haphazard, the streets were narrow and tortuous and the houses very irregularly built.[36]

The second city of Taxilā was known as Sirkap. It was built by the Bactrian Greeks in the early years of the 2nd century B.C.[37] This city was planned in close conformity with the Greek chess-board design in which the streets cut one another at right angles. Moreover in confirmity with Hellenistic principles of defence, the city walls included within the boundary a large area of hilly ground as well as an isolated acropolis. In spite of the fact that Sirkap was destroyed and rebuilt several times, the original planning of the city continued to exist till the end of the city's life.[38]

Sirsukh, the third city at Taxilā, was situated by the side of the Lundi Nala. This city was established by the Kuṣāṇas in the traditional manner after the contemporary Central Asian cities with which they were familiar. In planning, it roughly resembled a parallelogram with a perimeter of about 3 miles. The city was encircled by a massive stone wall, as noticed earlier in the case of Sirkap. Again, like Sirkap, Sirsukh also was gifted with a suburb on its western side and defended by an earthen work, called Tredi Ghar.[39]

Besides the remains of these cities a large number of Buddhist stūpas and monasteries are to be found at Taxilā. They are the Dharma-rājikā stūpa, the saṃghārāma at Kalawān, the monasteries and stūpas of Giri, the Kuṇāla and Ghaī stūpas, the saṃghārāmas of Bhāmalā, the Buddhist monastery and stūpa at Lālchak, Bādalpur, the Ionic temple at Jandial and the Bhāllar stūpa.[40] Most of these religious establishments were founded when the Kuṣānas had already established the city of Sirsukh.[41]

The Kuṣāṇa occupation of all these places, except the Bhīr Mound, can be demonstrated archaeologically. A large number of coins of Kujula Kadphises were discovered at Sirkap during the course of diggings. The find of such a large number of coins from Sirkap indicates the hold of this ruler at the city of Sirkap. It seems that after conquering Parthia (Ansi), Kabul (Kao-bu), Pu-ta and Kipin, as the *Later Han Annals* (*Hou-Han-Shu*) inform us, Kujula Kadphises also annexed Gandhāra and Taxilā.[42] However, it seems more likely that it was Wema Kadphises who

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36. Marshall, *op. cit.*, p. 4.
37. *Ibid.*
38. *Ibid.*
39. *Ibid.*
40. *Ibid.*, pp. 4-6.
41. *Ibid.*, p. 5.
42. *Ibid.*, pp. 66-67.

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conquered Taxilā and the rest of the Panjab, if not Gandhāra. This seems more reasonable, as the *Hou-Han-Shu* further informs us that Kujula Kadphises was succeeded by his son Wema Kadphises (Yen-Kao-Chen) who conquered India and set up an army leader there as Governor. The Kuṣāṇa conquest of Taxilā was accomplished soon after A.D. 60.[43] It was this ruler Wema Kadphises who built the third city of Sirsukh at Taxilā.[44] But even after setting up the new city, Sirkap still must have continued for some time in partial occupations of the Kuṣāṇas.[45]

The excavations at Taxilā (Sirkap) by Marshall (1913-34) and A. Ghosh* unearthed structural remains as well as other antiquities which prove the Kuṣāṇa hold over the city of Sirkap. Out of a total number of seven occupational layers, the top stratum (Stratum I) has been assigned to the period following the Kuṣāṇa conquest of Taxilā (*c.* A.D. 60).[46] Red ware, assigned to the Auṣāṇa period, and a good number of Kuṣāṇa coins were also discovered at Sirkap. Altogether 2,641 Kuṣāṇa coins, all of copper, except four silver pieces assigned to Kujula Kadphises,[47] were discovered here. Of these, the largest issues were of Kujula Kadphises (2,522). The coins of other kings were fewer in number. Only 37 coins of Wema Kadphises, 12 or Sotar Megas, 39 of Kaniṣka I, 4 of Huviṣka and 27 belonging to Vāsudeva were discovered.[48] A very negligible number of 3 copper coins belonging to later Kuṣāṇa period were also reported from Sirkap.[49]

The relative number of Kuṣāṇa coins discovered from Sirkap clearly demonstrates that after the reigns of Kujula Kadphises the Kuṣāṇa hold over Sirkap was gradually weakening. It is perhaps due to this reason that post Kujula Kadphises coins become fewer in number. The cause for the lesser circulation of Kuṣāṇa coins seems to be the transfer of the city to a new city site, i.e. Sirsukh. Nevertheless, the discovery of Kuṣāṇa coins from Sirkap in a chronological order means that even after the shifting of the city site, Sirkap remained in partial occupation of the Kuṣāṇas. A. Ghosh's excavation also brought a coin of Kujula Kadphises and another of Huviṣka from Sirkap.[50]

Soon after the conquest of Taxilā (Sirkap) the Kuṣāṇas selected a new city site at Sirsukh. This was the third and the last city of Taxilā. Marshall suggests three reasons for the transfer of city from Sirkap to Sirsukh. Firstly, perhaps the Kuṣāṇas wanted to mark their victory over Taxilā by founding a new city as it was a matter of pride for the conquering race to establish a new capital city. Secondly, the defences at Sirkap were inadequate from the strategic point of view. Another important reason seems to be the fact that shortly before the Kuṣāṇa invasion of Taxilā, Sirkap had been visited by a deadly plague and a devastating earthquake, which had wiped out a considerable number of inhabitants. So the Kuṣāṇas might have considered the old city as inauspicious and founded a new city at Sirsukh.[51]

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[43] Marshall, *op. cit.*, p. 67.

[44] *Ibid.*, p. 68.

[45] *Ibid.*, p. 112.

* A. Ghosh, "Taxilā (Sirkap) 1944-45", *Ancient India*, no. 4, 1947-48, pp. 41-84.

[46] Marshall, *op. cit.*, p. 118. For details about structures, see ch. III.

[47] *Ibid.*, II, pp. 85-86.

[48] *Ibid.*, pp. 785-788.

[49] *Ibid.*, p. 788.

[50] A. Ghosh, *op. cit.*, p. 81.

Cunningham places the city site of Sirsukh at the north-east of Babar Khana beyond the Lundi Nala and suggests that it was nearly square-shaped. The circumference of the city was nearly 15,300 feet or nearly 3 miles.[52] Marshall, however, thinks that the city of Sirsukh was slightly an irregular rectangle in shape.[53]

Marshall's excavations at Sirsukh have exposed the defences of the city, remains of a large building, pottery, stone and metal objects, finger rings, beads of semiprecious stones[54] and numerous copper coins. The site yielded a total number of 40 coins, the largest number of which belonged to the Kuṣāṇas. The following distribution of Kuṣāṇa coins were noticed : Kadphises I-3; Kara-Kadphises-1; Kadphises II-3; Kaniṣka-12; Huviṣka-1; Vasudeva-11 and the later Kuṣāṇas-6.[55] The discovery of Kuṣāṇa coins from the city site of Sirsukh clearly demonstrates the Kuṣāṇa occupation of this city. However, further details about this city are not known because the site has not been fully excavated. Marshall suggested that the city was built in the late 2nd or 3rd century A.D. and continued to remain in occupation from two or three centuries afterwards.[56]

Apart from these sites, Kuṣāṇa coins and associated antiquities have also been discovered from other adjoining Buddhist sites like the Dharamarajika Stūpa, Kalawan, Jandial etc. These finds alongwith the Taxilā silver scroll inscription of the year 136[57] indicate the Kuṣāṇa hold over Taxilā. Besides, several other epigraphic records, e.g., the Zeda inscription of Kaniṣka of year 11, the Manikiyala stone inscription of Kaniṣka, dated in the year 18, the Ara stone inscription of year 41, the Sui Vihar Copper plate inscription of Kaniṣka belonging to year 11, suggest the extension of the Kuṣāṇa authority South of the Panjab.[58] Thus, all the important towns of Panjab witnessed the Kuṣāṇa influence.

II. Kashmir

Some literary sources inform us about the Kuṣāṇa towns situated in the adjoining valley of Kashmir, now in India proper. *The Annals of the Later Han Dynasty* tells us that Kujula Kadphises conquered Kashmir.[59] It would mean that the towns that existed in Kashmir at that time came under the Kuṣāṇa occupation with the conquest of the valley of Kashmir. Besides this Chinese evidence some other sources confirm the view that Kashmir formed the part of the Kuṣāṇa empire. The

[51] Marshall, *op. cit.* I, p. 217.

[52] *A.S.I.R. Cunningham*, Vol. II, p. 121; *Annual Report, A.S.I., Frontier Circle*, 1914-15, p. 2.

[53] Marshall, *op. cit.*, I, p. 217.

[54] *Ibid.*, pp 219-220. For further details about structures and other antiquities, see chapters III & IV.

[55] *Ibid.*, p. 221.

[56] *Ibid.* (The dating of Marshall, however, does not seem to be correct. The initial date of the building of the city should be placed in the 1st century A.D.).

[57] Sten Konow, *CII*, II, part I, Varanasi, 1969, No. XXVII, pp. 70-77.

[58] B. Chattopadhayaya, *Kuṣāṇa State and Indian Society*, Calcutta, 1975, p. 48.

[59] *Ibid.*, p. 49.

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first Book of *Rājataraṅgiṇī* of Kalhaṇa gives an account of the Kuṣāṇa kings and the cities built by them. Kalhaṇa remarks that "there were in this land three kings called Huṣka, Juṣka and Kaniṣka who built three towns named after them [Huṣkapur, Juṣkapur and Kaniṣkapur]".[60] The Khalatse Inscription of the year 187, discovered near Ladakh belonging to Kadphises II,[61] also may be taken to suggest the inclusion of the area in the Kuṣāṇa empire. Moreover, during the excavations at Uṣkar, a stone block inscribed with the work *Heskayu* in the Sarada characters of the mediaeval period, was discovered. The word has been taken to denote the meaning of *Heskapur* or *Huskapur*, the ancient name of the town, which according to the *Rājataraṅgiṇī* was founded by the Kuṣāṇa king Huviṣka or Huṣka.[62] Thus, both the literary and epigraphic evidence strongly suggests the inclusion of Kashmir valley in the Kusāṇa empire and the existence of at least three Kuṣāṇa towns, founded by three kings of the dynasty.

The three Kuṣāṇa towns mentioned by the *Rājataraṅgiṇī* have been identified by Cunningham. Huṣkapur is said to be the same place as Varahmula (Barahmula on the Behat). Hushkar or Ushkar exists in the form of a village, two miles to the south-east of Baramula. In the opinion of Kashmiri Brahmanas, the place represents the site of the Huskapur, which according to the *Rājataraṅgiṇī* was laid out by the Turushka king Huviṣka, about the beginning of the Christian era.[63] Hsuna-Tsang is also said to have visited this place and spent one night in the monastery *U-Sse-Kia-lo* (Hushkara).[64] Juskapur founded by Juṣka, a brother of Kaniṣka and Huviṣka has been identified with Zukru or Zukur, a big village, 4 miles to the north of Srinagar.[65] Kaniṣkapur is represented by Kansipore, a village situated at a distance of 10 miles towards south from Srinagar. Cunningham also observed here a Sarai, named Kampur Sarai, a corrupt name of Kaniṣkapur or Kanikhpur.[66] Thus the tradition still associates these three towns with the Kuṣāṇa kings. However, some controversy prevails as regards the third Kuṣāṇa king, i.e., whether the king mentioned in the *Rājataraṅgiṇī* was Kaniṣka I or II. H.C. Raychaudhuri and some other scholars think that the king Kaniṣka mentioned by Kalhaṇa was probably Kaniṣka II.[67] On the other hand Stein and others identify him with Kaniṣka I. In fact the sequence in which the *Rājataraṅgiṇī* mentions the names of three Kuṣāṇa kings and the cities built by them makes one to think that it was Kaniṣka II who was the founder of the city of Kaniṣkapur. However, it may be suggested that as the Sāh-jī-kī dherī inscription refers to the "Kaniskapure nagare" along with the name of "mahārājā Kaniṣka",[68] there is possibility that the town

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60. M.A. Stein, Kalhaṇa's *Rājataraṅgiṇī*, Vol. I, I. 168.
61. Sten Konow, *op. cit.*, No. XXIX, pp. 79-81.
62. *ASI—AR*, 1916-17, p. 13.
63. Cunningham, *op. cit.*, p. 77, V.K. Mathur. *op. cit.*, p. 103.
64. S. Beal, *The Life of Hsuan-Tsang*, Delhi, 1973, p. 68.
65. Cunningham, *op. cit.*, p. 85; V. K. Mathur, *op. cit.*, p. 368.
66. *Ibid.*, p. 84; *Ibid.*, p. 131.
67. H.C. Raychaudhuri, *Political History of Ancient India*, Calcutta, 1972 (seventh edition), p. 422. For similar views see B. Chattopadhyaya. *op. cit.*, p. 49; K.S. Saxena, *Political History of Kashmir*, Lucknow, 1974, p. 24.
68. B.N. Mukherjee, *op. cit.*, pp. 39-46.

established by Kainṣka I in Kashmir also came to be known as Kaniṣkapur.

Apart from giving the names of the towns established by the Kuṣāṇas in Kashmir the *Rājatarangiṇī* does not give any information about these towns. Other literary texts also are not helpful as regards the Kuṣāṇa towns is the valley of Kashmir. Unfortunately, sufficient archaeological excavations also have not been made to dig out the remains of these towns. The archaeologists' main interest in this area has been confined to unearthing Buddhist art relics only. It is very difficult, therefore, to give an account of the lay out or the cultural wealth of these Kuṣāṇa towns.

Nevertheless, archaeologists have succeeded in bringing to light various other Buddhist settlements of the Kuṣāṇa period which attest the influence of the Kuṣāṇas in the Kashmir valley. Some structures of the Buddhist monuments, belonging to the Kuṣāṇa period, were exposed at Harawan and Uskar. These were similar in plan and elevation to the contemporary Buddhist buildings of Gāndhāra.[69] Within Jammu, the sites in the Akhnur area yielded the redware pottery with the types assigned to the Kuṣāṇas, i.e., bottle-necked jar, sprinklers, spouts, etc.[70] The sites of Mandī Kā Mehrā and Guda also revealed the pottery similar to those discovered from Akhnur. A damaged terracotta head with Kuṣāṇa features was also discovered here.[71] In subsequent explorations also from Akhnur pottery of the early centuries of the Christian era represented mainly by sprinkler and bowl were discovered.[72] These finds unmistakably suggest the influence of the Kuṣāṇas in this area, but due to partial excavations it is very difficult to say whether these sites with Kuṣāṇa antiquities were urban or not.

III. Panjab and Haryana

Other important sites with Kuṣāṇa characteristics are situated in the Panjab and Haryana. Extensive explorations in tehsil Phillaur of Jullunder in Panjab brought to light at least ten sites having Kuṣāṇa red ware and followed by Muslim glazed ware only.[73] Of these, three sites have yielded only Kuṣāṇa and Muslim wares, whereas the remaining ones seem to be of earlier periods.[74] The large mounds of at least two of these suggest that they represent the sites of towns.[75]

At Sanghol, in the district of Ludhiana, the period V was noticed to be rich in finds belonging to the Kuṣāṇa and Gupta periods. Many structures of mud bricks as well as baked bricks, drains sullage, water jars and ovens were noticed in the various levels of this period. Of other notable finds, mention may be made of the Indo-Parthians, Kuṣāṇa and tribal state coins. Besides, a terracotta coin mould of

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[69] R.C. Kak, *Ancient Monuments of Kashmir*, London, 1933, p. 50.

[70] *IAR*, 1962-62, pp. 16-17.

[71] *Ibid.*, p. 17.

[72] *Ibid.*, 1962-63, p. 9.

[73] *The Journal of Indian History*, XIV (1967), p. 568.

[74] *Ibid.*

[75] *Ibid.*, pp. 564-65.

Gondophares, three sealings, two of which bear legends in the early Gupta Brahmi script, terracotta figurines, votive tanks and Buddha figure of Mathura school, belonging to the Kuṣāṇa period were discovered.[76] The Kuṣāṇa finds from Sanghol presuppose Kuṣāṇa habitation here and the discovery of the coin mould indicates it to be a town which continued to flourish in the Kuṣāṇa period.*

Ropar situated nearly 60 miles north of Ambala in the Panjab, on the Sutlej has a long and continuous occupation, extending from the Harappan times to nearly present days.[77] The material collected from other sites in the neighbourhood of Ropar indicates a similar sequence over a wide area and hence Ropar may be taken to serve as an index for the entire region.[78] The occupational period at Ropar (p. IV *c.* 200 B.C.—A.D. 600) covers the rule of the Śuṅgas, Guptas and successors. Although no structures belonging to the Kuṣāṇa period could be exposed, a large hoard (600) of Kuṣāṇa copper coins of Vāsudeva[79] were discovered from the upper levels. The discovery of the Kuṣāṇa coins in a large hoard is very significant. It suggests that this important town of the Harappan age, continued to flourish even in the Kuṣāṇa period. The site has also yielded terracotta figurines of Kuṣāṇa style in the long-necked, narrow mouthed "sprinklers" associated with the Kuṣāṇa.[80] Thus, the Kuṣāṇa coins and the typical Kuṣāṇa pottery discovered from Ropar indicate the Kuṣāṇa occupation of Ropar.

Elsewhere, the Kuṣāṇa coins have also been discovered from Ajaram, 12 km south of Hoshiarpur in the Panja[81] and Sunet[82] near Ludhiana in the same state. The find of Kuṣāṇa coins from the Panjab suggests that this region was under the

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[76] *IAR*, 1968-69, p. 25.

* Situated on the top of a mound which reaches a height of 24 metres and spread over an area of 200×200 metres, Sanghol is a village near Samrala in Ludhiana district. According to local tradition Sanghol was formerly known as "Sanghol a dwip" and the folk tale of Rup Basant was associated with it. The name Sanghol might have been derived from Sanghalaya, a home of Sangh or Sanghpur, meaning the town of Sangh for the reason that some Buddhist monasteries were located there. In all probability it may bethe *She-to-tu-lu* of Hsuen-Tsang who refers to the existence of ten monasteries in about it.

Six periods of occupation were noticed here. The earliest is late Harappan (Bana) Culture (1700 to 1300 B.C.). There is nothing worth mentioning with regard to the second, third and fourth periods; the fifth period saw the site rise to affluence. The concentrated settlement not only sprawled over the entire expanse of the present mound but it also spread far into the surrounding fields. Polished wares, coins,bangles, ivory combs and stone and terracotta beads were discovered from this layer. To this age belongs the mud fortress of Hathiwara (elephant stable). There is an unmistakable indication of the existence of the quadrilateral or/and pentagonal fort with massive ramparts and corner towers.

The defence complex is unique in character and very systematic and it, finds literary corroboration in Kautilya's *Arthaśāstra* and in commentary to the *Udaya Jātaka*.

Ashok Chopra, "Punjab ... at the dawn of Civilization', *The Sunday Standard* May, 15, 1977, p. 9.

[77] *AI*, no. 9, 1953, p. 123.

[78] *Ibid.*

[79] *Ibid. IAR*, 1953-54, p. 7.

[80] *Ibid.*, p. 126.

[81] *IAR*, 1969-70, p. 31.

[82] *Ibid.*, 1971-72, p. 70.

Kuṣāṇa occupation. If further explorations and excavations are continued in the Panjab, more material bearing on the Kuṣāṇa times may come to light.

Haryana seems to have been thickly populated during the early centuries of the Christian era. At Bārā, in the district of Ambala, datable deposits belonging to the Kuṣāṇa period were noticed in the lower levels while the upper strata exposed materials belonging to the mediaeval period.[83] Another site, Daulatpur in Karnal district, remained in continuous occupation from PGW period to the early mediaeval period, when the site was finally deserted.[84] The Theh Polar site in the same district yielded some crude imitations of these coins of Vāsudeva which were adopted by the foreign ruling chiefs of the Panjab in the 3rd or 4th century A.D. In one trench of this site were also discovered two debased copper coins bearing the figure of a Kuṣāṇa type of king at an altar.[85] Moreover, the Karnal hoard of 232 copper coins contained some coins of Vāsudeva also.[86] Similarly, the ancient site of Rohtak yielded a coin mould which was perhaps used to cast some coin of Huviṣka.[87] The discovery of Kuṣāṇa coins and coin moulds from Panjab and Haryana strongly suggests that it remained under the Kuṣāṇa occupation and the find spots of moulds were perhaps mint towns under the Kuṣāṇas.

Elsewhere in Haryana, the famous epic site of Kurukṣetra, represented by a series of mounds at Amin, Thānesar, Pehowa and Rājā-Karṇa-Kā-Qilā, has exposed valuable Kuṣāṇa antiquities which strongly suggest it to be a flourishing town in the Kuṣāṇa period. At Amin two inscribed pillars, datable to the Kuṣāṇa period, were noticed.[88] The occupational period at Rājā-Karṇa-Kā-Qilā extended from *c.* 400 B.C. to A.D. 300.[89] The period II of the site yielded red ware of the early centuries of the Christian era, which though mostly plain, was decorated with various stamped designs. Other notable finds include copper coins, beads of semi-precious stones, shell bangles, terracotta objects like animal figurines, terracotta wheels and dabbers.[90] A good number of copper rods, blade pieces and a variety of household objects of iron and stone were also discovered here.[91] Seven structural phases, belonging to Period II were noticed in which generally mud bricks were used excepting in upper levels where the use of burnt bricks was attested.[92] In earlier excavations also dwelling houses belonging to the Kuṣāṇa period were exposed in which burnt bricks of uniform size were used.[93] Three clay sealings,

[83] *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 94.

[84] *IAR*, 1968-69, p.

[85] *IHQ*, Vol. XXXI, 1955, no. 4, p. 307.

[86] *Ibid.*, pp. 312-13.

[87] *Ibid.*, p. 309.

[88] *AI*, No. 9, 1953, p. 130; *ASI—AR*, 1921-22. The pillars are carved on four sides and have no sockets for cross bars. The inscriptions are quite short and merely supply the names of the donar as *Isimitra*.

[89] *IAR*, 1970-71, pp. 30-31.

[90] *Ibid.*, p. 31.

[91] *Ibid.*

[92] *Ibid.*

[93] *ASI—AR*, 1922-23, p. 88.

with legends in the Brāhmī script of the early centuries of the Christian era were discovered from Rājā-Karṇa-Kā-Qilā.[94] All this clearly suggests the Kuṣāṇa occupation of Kurukṣetra.

IV. Delhi Mathura

The excavations at Purānā Quilā in New Delhi, near the famous historic site of Indraprastha, have revealed rich signs of habitation in the Kuṣāṇa period. The antiquity of this site goes back to nearly 1000 B.C. when it was first inhabited by the people using PG ware. By the 6th century B.C. the site had come under the users of the NBP ware. Subsequently it remained under the rulers of Mathura, the Yaudheyas in the 1st century A.D. and the Kuṣāṇas in the 2nd-3rd centuries A.D.[94]

Structural differences were noticed during various stages of the excavations at Purānā Quilā. It was noticed that the Mauryan period was characterized by the occurrence of mud-floors and NBP and the Śuṅga period by the remains of rubble structures. But during the Śaka-Kuṣāṇa phases, structures of burnt brick were encountered.[96] This is a clear indication of the economic prosperity and change in the status of the inhabitants. The brick structures along with other finds suggest that by the Śaka-Kuṣāṇa period the site had attained the status of a flourishing town. This might have become possible on account of its location being suitable for commercial transactions. Along with regularly and systematically built structures of the Kuṣāṇa period were found the red ware, consisting of Kuṣāṇa bowls and sprinklers which were noticed throughout the period, bone dice of various types, terracotta plaques and figurines, a figure of a small Yakṣha (Kubera) prepared out of a double mould, a turbaned head with moustaches,[97] fragments of a votive tank, skin rubbers, terracotta figurines including an impressive head, wearing a decorated cap, a small piece of an ivory handle and crucibles.[98] Kuṣāṇa copper coins were also discovered here along with the coins belonging to Mathura Kings and Yaudheyas.[99] The material exposed from the Purānā Quilā fits well in our framework of towns and hence it may be argued that during the Kuṣāṇa period a town flourished here.

V. Rajasthan

The signs of Kuṣāṇa urban settelements have been brought to light in the neighbouring area of Rajasthan also. The Period V at Noh, in the district of Bharatpur of Rajasthan, which has been assigned to the period from the early 2nd century B.C. to late 3rd century A.D.,[100] exposed typical terracotta animal and human figurines with elaborate coiffure and jewellery and Kuṣāṇa pottery.[101] Other important finds with Kuṣāṇa features are a bowl inscribed in the Brāhmī characters, sherds with *triratna* and fish symbol resembling the specimens from Hastinapur IV,[102] toycarts, dice, flesh rubber, antimony rods, shell bangles, potter's stamps, glass beads of semi-precious stones and terracotta.[103] A well preserved smelting furnace with a large quantity of iron slag was also exposed at Noh in course of excavation.[104] Similar smelters were discovered in 1969-70 also. The site also yielded several cast copper coins[105] and seals bearing inscriptions in Brāhmī characters.[106] The material relics from the site thus suggest the industrial richness of the site in the Kuṣāṇa period. The structural activity also indicates a flourishing habitation in the Kuṣāṇa period. Altogether eight structural phases within this period were noticed. The use of baked bricks of uniform size in the structures was a common feature.[107] Thus well planned structures and material relics exhumed from Noh strongly suggest it to be a town in the Kuṣāṇa period.

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[94] *IAR*, 1971-72, p. 24.
[95] *Ibid.*, 1954-55, pp. 13-14.
[96] *Ibid.*, 1969-70, pp. 3-5, For details of structures, see next chapter.
[97] *Ibid.*, p. 5.
[98] *Ibid.*, 1970-71, p. 19.
[99] *Ibid.*, 1969-70, p. 5; 1970-71, p. 19.
[100] *Ibid.*, 1965-66, p. 38.

Another important Kuṣāṇa town in Rajasthan seems to be Bairat in the district of Jaipur situated in the midst of a circular valley, famous for copper mines. The place lies nearly 104 miles south to Delhi and 41 miles north of Jaipur.[108] The valley with its natural surrounding and copper mines fecilitated the growth of town here. It afforded a natural defence and abundant raw materials for the growth of copper industry. Moreover, its direct link with other contemporary urban centres and markets also explain the growth of a town at Bairat.

The ancient town of Bairat is traditionally associated with the *Mahābhārata.* It is said to have been founded by king Virāṭa, the son of Rājā Vena. The town served as the capital of the *Matsya* kingdom. It is also said that it was at Bairat where the five Pāndus or Pāṇḍavas passed their 12 years' term. The earliest historical notice of this occurs in the accounts of Hsuan-Tsang. His Po-Li-Ye-To-Lo (Pāryātra) has been identified by Beal with Virata of Bairata.[109]

The ancient fortress belonging to the old city of Bairat is said to have been situated on a high hill, to the south-east from the present city of Bairat. The site of the ancient city itself is said to have extended from the base of that hill to the present town.[110] The excavations at Bairat have brought to light ceramics of the early centuries of the Christian era. The Period III of the site, assignable to the early centuries of the Christian era, remained neglected for a long period. The following Period IV was characterized by the occurrence of the mediaeval glazed ware.[111] However, due to inadequate excavations, details about town-planning and other cultural deposits are not known.

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[101] *IAR*, 1964-55, p. 35; 1965.56, p. 38; 1968-69, p. 26; 1970-71, p. 62 and 1971-72, p. 42.
[102] *Ibid.*, 1964-65, p. 35; 1965-66, p. 38.
[103] *Ibid.*, 1965-66, p. 38; 1970-71, p. 62; 1971-72, p. 42.
[104] *Ibid.*, 1970-71, p. 62.
[105] *Ibid.*, 1965-66, p. 38; 1970-71, p. 62; 1971-72, p. 42.
[106] *Ibid.*, 1970-71, p 62.
[107] *Ibid.*, 1965-66, p. 38; 1971-72, p. 42. For further details of structures, see the next chapter.
[108] *A.S.I.R.—Cunningham*, II. 245. See also D.R. Sahni, *Archaeological Remains and Excavations at Bairat*; Cunningham, *AGI*, p. 287.
[109] S. Beal, *op. cit.*, Bk. IV, p. 179; fn. 35.
[110] *A.S.I.R. Cunningham*, VI, p. 101.

VI. Gaṅgā-Yamunā Valley and its Peripheral Areas

By far the largest number of Kuṣāṇa urban centres were situated in the Gaṅgā-Yamunā valley, comprising the parts of modern Uttar Pradesh and Bihar. Excepting few areas, the entire state of Uttar Pradesh is watered regularly by large rivers like the Gaṅgā, Yamunā, Gomatī and Ghāgarā, besides a number of tributary streams like the Chambal, Betwā, Ken, Rāptī and the Rāmagaṅgā. This Gangetic river system has proved to be the greatest boon to the inhabitants of this part of the country. This facilitated the production of the economic surplus and the development of the communication system which in turn led to the growth of several earliest cities. These cities served as administrative headquarters, trading or religious and educational centres.

In the districts of Meerut and Muzaffarnagar of Uttar Pradesh eighteen sites, which have been explored extensively, reveal that the red ware, characteristic of the Kuṣāṇa period, was succeeded by the mediaeval ware. Some of the mounds of these sites are fairly large and there is possibility of their being remains of towns.[112] Kaseri, another site in the same district, although termed as a rural site,[113] has predominance of red ware in Period IV.[114] Another Śuṅga-Kuṣāṇa site has been reported at Suneheti Mustahkam in Saharanpur tehsil.[115] Moreover, a hoard of 22 gold coins belonging to Kuṣāṇas and Indo-Sassanians was discovered from Harisinghpur of Meerut district.[116]

But of all the excavated sites in the district of Meerut, Hastināpura is the most important. The river Gaṅgā and the Budhī Gaṅgā flow at a distance of five and one mile respectively from the mound representing the site of ancient Hastināpura. Perhaps in ancient times the main river was very close to Hastināpura.[117]

Tradition associates the city of Hastināpura with the *Mahābhārata*. It was founded by Hastin and hence was known as Hastināpura. A vivid description of this town is preserved in the *Mahābhārata*. It is said that when the floods of the Gaṅgā destroyed this city, the Pāṇdavas, who resided here, moved to Kauśāmbī, another important ancient city. The *Mahābhāṣya* of Pāṇini informs us that the city of Hastināpura is along the Gaṅgā, just as Vārāṇasī is.[118]

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[111] *IAR*, 1962-63, p. 31.

[112] *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 95.

[113] "This is what its excavator Professor Romila Thapar would like to call it". *Ibid.*

[114] *IAR*, 1969-70, p. 43.

[115] *Ibid.*, p. 44.

[116] *Ibid.*, 1953-54, p. 39.

[117] *AI*, nos. 10-11, 7954-55, p. 9.

[118] P.V. Kane, "Ancient Cities and Towns Mentioned in the *Mahābhāsya*", *JBBRAS*, Vol. XXVII, pt. I, 1951, pp. 38-42.

The excavations conducted by Shri B.B. Lall (1950-52) at Hastināpura have brought to notice five habitational layers. The first three occupational layers belonged to a period, ranging from pre-1200 B.C. to the 3rd century B.C. These strata were characterized by the prevalence of Ochre-coloured, Painted-Grey and the Northern Black Polished wares. Although the evidence of burnt bricks and coinage was found during the third stratum (early 6th to early 3rd century B.C.) earlier occupational layers suggest that the settlement was rather sporadic. The habitation at Hastināpura abruptly came to an end towards the close of the Period III due to large scale conflagration which practically destroyed the entire town.

A new town emerged on the ruins of the earlier ones at Hastināpura during Period IV, extending from the early 2nd century B.C. to the end of the 3rd century A.D. It appears that the town was resettled during this period. New houses of burnt bricks were constructed. The ceramic industry of the period was characterized exclusively by the occurrence of red ware. Copper and iron came to be profusely used as is indicated by the excavations. The votive tanks appear for the first time during the middle phase of this period. In the late level of this period were also discovered ten coins imitating those of the Kuṣāṇa king Vāsudeva, datable to the middle of the 3rd century A.D.[119] Thus, it is clear that in spite of the fact that Hastināpura became inhabited round about 1200 B.C., it was during the Period IV, covering the Kuṣāṇa phase, that it attained that the site became a full-fledged town. This was the most flourishing and prosperous period at Hastināpura.

The excavations at Hastināpura revealed seven structural sub-periods in Period IV; marked by the use of bricks. The red ware pottery consisted of types and forms commonly met with at sites of the early centuries of the Christian era, e.g., the common bowl, lid with a central button-knob, bottle-necked sprinklers, etc.[120] The pottery at Hastināpura, belonging to Period IV, are generally stamped or have impressions of designs. Similar decorative designs and impressions are noticed on the pottery of the comparable period at Kauśāmbī.[121]

Apart from the structural and ceramic evidence, the Period IV layers at Hastināpura have also yielded a good number of terracotta figurines and about half a dozen votive tanks,[122] various household objects of terracotta and stone.[123] bangles made of terracotta, glass, copper, shell, ivory, agate and bone,[124] finger rings,[125] a large number of beads of terracotta, semi-precious stones, copper and glass,[126] copper antimony rods, iron nails, copper miniature bells[127] as well as two

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119. *AI*, no. 10-11, pp. 8-23.
120. *Ibid.*, p. 31; see also p. 63.
121. *Ibid.*, p. 63.
122. *Ibid.*, p. 87.
123. *Ibid.*, pp. 87-90.
124. *Ibid.*, p. 90.
125. *Ibid.*, pp. 91-92.
126. *Ibid*, pp. 92-94.
127. *Ibid.*, p. 95.

inscribed potsherds and a terracotta seal of the 2nd or 3rd century A.D.[128] These finds are of particular significance as they indicate the urban and sophisticated nature of the inhabitants and at the same time economic prosperity of the people who used them. Thus, all the evidence from Hastināpura make us to believe that it was a prosperous town during the Kuṣāṇa period.

Fifteen explored sites in the district of Saharanpur have also yielded Śuṅga-Kuṣāṇa ware followed by the mediaevel ware.[129] Similarly, explorations in the districts of Etah, Bulandshahar and Moradabad have brought to light many sites where red ware was followed by mediaeval ware.[130] In Etawah district at Chakannagar Kheda, situated on the right bank of the Yamunā, sherds of PG and NBP wares, and terracotta figurines, belonging to the early centuries of the Christian era, were discovered.[131]

Antiquities belonging to the Kuṣāṇa period have also been unearthed from Atrañjikhera, situated in the Kasganj tehsil of Etah district in Uttar Pradesh. Cunningham suggested that it is the same place a *Pi-lo-Shan-na*, visited by Hsuan-Tsang.[132] V.K. Mathur, however, thinks that Cunningham's identification of Atrañjīkhera with *Pi-lo-Shan-na* is wrong.[133] Whatever may be the actual identification of the place, it cannot be denied that the ruins at Atrañjīkhera represent the site of an ancient city. A large mound, measuring 3960×1500×65 feet, was excavated here, and it exposed antiquities belonging to the Śuṅga, Kuṣāṇa and Gupta periods. The place is traditionally said to have been founded by the legendary king Veṇa.[134]

The excavations at Atrañjīkhera have brought to light an exclusively redware industry in the higher levels. During Period IV (*c.* 200 B.C.—A.D. 300) redware pottery of medium fabric, assigned to the early centuries of the Christian era, were noticed. Moreover, terracotta human and animal figurines, beads and other miscellaneous finds also point to the same period.[135] Burnt brick structures were also noticed here.[136] Among the associated finds from the Kuṣāṇa layer were two copper coins of Kuṣāṇa king Vāsudeva[137] and a coin mould.[138] However, we are still not much informed about other antiquities discovered in the excavations, as the detailed and final excavation report has not been published as yet. Nevertheless, whatever material has come to light may lead us to term it as an urban settlement in the Kuṣāṇa period.

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[128] *AI*, no. 10-11, pp. 99-101.
[129] *IAR*, 1964-65, p. 44.
[130] *Ibid.*, 1970-71, p. 11.
[131] *Ibid.*, 1969-70, I. 81.
[132] Cunningham, *A.G.I.*, pp. 306-11.
[133] V.K. Mathur, *op. cit.*, p. 18.
[134] *Ibid.*
[135] *IAR*, 1960-61, p. 35; 1962-63, p. 36.
[136] *Ibid.*
[137] *Ibid.*
[138] *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 96.

The most important Kuṣāṇa town situated in Uttar Pradesh was, of course, Mathura. This city has provided evidence of the most prolonged Kuṣāṇa occupation. A large number of inscriptions belonging to the Kuṣāṇas were discovered from various sites round about Mathura. They give an idea of the Kuṣāṇa kings, their officials, and range in dates from the time of Wema Kadphises to that of Vasudeva I. Numerous coins of Wema Kadphises, Kaniṣka, Huviṣka and Vāsudeva were discovered here. It is very likely that Mathura was the eastern capital of the Kuṣāṇas. The vast collection of antiquities, preserved in the museums at Mathura and Lucknow, speak highly of the cultural traditions of Mathura, attained under the liberal patronage of the Kuṣāṇas.[139]

The earliest account of the city of Mathura is given by Megasthenes who observed that Heracles was worshipped in the country of Saurasenoi who had two big cities Methora and Chrysobera.[140] Kauṭilya also speaks of the cotton industry of Madhura.[141] References to this place are found in other literary texts like the Epics, the *Madhurā Sūtra*, the *Miliñdapanho* and the *Mahābhāṣya*[142] of Patañjali. In the Jaina works the place Mathura was also known as Mahurā or Uttara Mahurā, which has been located at Maholi, 5 miles south-west of the present town of Mathura.[143] The Chinese pilgrims, Fa-hsien and Hsaun-Tsang, also give their impressions about the prosperous city of Mathura.[144] Tradition assigns the foundation of this city either to a demon called Madhu (and hence Madhupur as a synonym of Mathura), or Śatrughan, the younger brother of Rāma. According to a Jain text Sauryapur (Mathura) was ruled by a strong king named Vāsudeva.[145]

The location of the city of Mathura gave it a commanding position. It occupies an important border line position between the plains of Panjab and the beginning of Central India. Its commercial potentiality increased due to the fact that all the important trade routes running north-south passed through this place. Situated as it was on the Yamunā on the royal highway running from Pāṭaliputra to Taxilā and joined by the south Indian routes of Barygaza, Bābaricum and Patala, it soon rose to the status of a great trading station.[146]

The city began to come into prominence in the Śuṅga period. The establishment of the Śaka-satraps might have influenced the selection of Mathura as a political centre in the early centuries of the Christian era, when under the Kuṣāṇas it reached the high water mark of its glory. Moreover, the political importance of

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[139] B. Chattopadhyaya, *op. cit.*, p. 50.

[140] H. Chakarbarti, *Trade and Commerce of Ancient India*, Calcutta, 1966, p. 169.

[141] *Arthaśāstra*, II. XI. 81. R. Shamasastry, however, thinks that it refers to southern Madhura. See *Kauṭilya's Arthāśāstra*, Mysore, 1967 (eighth edition), p. 84. fn. 2. But as Hsuan-Tsang notes that the country of Mo-tu-lo (Mathura) produces a fine variety of cotton fabric, we may think that Kauṭilya also was referring to this Mathura and not to southern Mathura. See Beal, *op. cit.*, Bk. IV, pp. 179-80.

[142] P.V. Kane, *op. cit.*, p. 39.

[143] J.C. Jain, *op. cit.*, pp. 308-309.

[144] Legge, *op. cit.*, pp. 42-43; Beal, *op. cit.*, Bk. IV, pp. 179-80.

[145] B.C. Law, *op. cit.*, p. 184.

[146] H. Chakravarti, *op. cit.*, p. 170.

Mathura under the Kuṣāṇas is indicated by the existence of royal gallery of sculptures representing royal figures, discovered at Māṭ, near Mathura.[147]

Nearly a century's explorations and excavations at the different sites of Mathura have brought to light abundant material bearing on the Kuṣāṇa history, art and religion. Cunningham succeeded in discovering many old and valuable inscriptions of Kaniṣka, Huviṣka and Vāsudeva, ranging from the year 5 to 98 *Saṁvat*. He also discovered a large bell capital of a pillar surmounted by an elephant, bearing the name of King Huviṣka and with date as 39 *Saṁvat*, from the Kañkālī mound.[148] In subsequent years Cunningham brought to light the Huviṣka Vihāra and the Kunda-Suka Vihāra near the Jail mound. The Kunda-Suka Vihāra may be the same as the "dry tank" of Hsuan-Tsang.[149] Another important discovery from the mound was an inscription of Kaniṣka dated in the year 9.[150] Cunningham also noticed pillar bases, belonging to the monastery of Huviṣka at Mathura. Another inscribed pillar with an inscription of Huviṣka, dated year 51, was found.[151] Subsequentex cavation also brought to light inscriptions of the Kuṣāṇa period. These include the Chhargaon inscription and Dāujī inscription. Both the inscriptions belong to Huviṣka and are dated in the years 40 and 52 respectively.[152] Besides, there were also discovered numerous sculptures and a few epigraphs of the Kuṣāṇa period, 6 of which belong to Huviṣka.[153] An inscription of Huviṣka, dated in the 28th regnal year, records a perpetual gift or endowment made for an alms house by Vakanapati.[154] These and several other inscriptions suggest the stronghold of the Kuṣāṇas at Mathura. The generosity and the liberal patronage of the Kuṣāṇas to arts and the policy of religious tolerance pursued by them, led to the establishment of several religious orders of Buddhism, Jainism, Vaiṣṇavism, Nāga worship, and to the efflorescence of trade and industry. The place thus became an industrial, commercial and religious centre of prime importance under the Kuṣāṇas.

Apart from inscriptional evidence, the architectural complex of burnt bricks excavated from several sites of Mathura,[155] numismatic and other materials indicate the urban nature of settlement at Mathura during the Kuṣāṇa period. Kuṣāṇa copper coins along with beads of semi-precious stones and terracotta figurines, comparable to those discovered from Ahicchatra (A.D. 100-350) were found during the excavations of 1954-55 at Mathura.[156] At Sonkh, another site near Mathura, where excavations were conducted during 1969-70, remains of seven houses could be excavated, belonging to the earliest phase of level 16, representing Kuṣāṇa phase. Pottery, terracottas, stone plaques of Durgā Mahiṣamardinī, Skanda, Viṣnu and maitrakas with Kuṣāṇa features, were discovered from these houses. The house also yielded 120 copper coins, stored in a small jar. Of these coins, two belonged to Huviṣka and the rest were either of Vāsudeva I or Kaniṣka III.[157] Moreover, the excavations of 1970-71 and 1971-72, brought to light an apsidal brahmanical temple, assigned to the time of Kaniṣka I on the basis of the coins discovered in the debris of this temple.[158] Moreover, Stuart Piggot, on the basis of Hsuan-Tsang's account of Mathura, suggests that there existed a record office of the Kuṣāṇas at Mathura.[159]

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[147] Stuart Piggot, *Some Ancient Cities of India*, *Oxford* 1945, p. 42.

[148] *A.S.I.R. Cunningham*, III, pp. 14-20.

[149] *Ibid.*, IV, pp. 238-39. (This was the place where a monkey is said to have offered honey to Buddha.) See Beal, *op. cit.*, IV, p. 182; and Watters, *On Yuan Chwang's Travels in India*, London, 1904, p. 309.

[150] *Ibid.*, pp. 239-40.

[151] *Ibid.*. XVII, pp. 107-108.

[152] *AR—ASI—CC*, 1908, p. 38 and 1910, p. 7.

[153] *Ibid.*

[154] *Ibid.*, 1930-34, p. 207.

[155] For details of structures, see ch. III.

[156] *IAR*, 1954-55, pp. 15-16.

The available evidence—structural, epigraphic, numismatic and the material remains—thus gathered from several sites of Mathura, strongly suggest it to be a flourishing town during the Kuṣāṇa period. It was the most important of all the Kuṣāṇa towns in India proper and functioned as the eastern capital of the Kuṣāṇa empire.

The same cultural pattern is noticed at other sites in Uttar Pradesh. Manwan in the district of Sitapur confirms the general pattern of structural history as indicated above.[160] The site remained under occupation from *c.* 500 B.C. to mediaeval times. The Śuṅga-Kuṣāṇa phase here was characterized by the discovery of sprinklers, ink-pot type lids, terracotta human figurines and terracotta sealings, with legends in Brāhmī characters.[161]

Sāvathī or Srāvastī, was another important ancient town where evidence of Kuṣāṇa occupation has been attested by archaeological excavations. The Buddhist tradition gives much importance to the famous city. The majority of the *Jātaka* stories were narrated by the Buddha here.[162] Budhaghoṣa tells us that the town acquired the name of Sāvathī because it was the dwelling place of the sage Sāvatha. It appears thus, that originally Sāvathī was a religious place, but subsequently it attained the status of a flourishing town due to socio-economic changes. The Epics, however, have different tradition as regards the naming of this city. It is

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157. *IAR*, 1969-70, p. 42.

158. *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 96; *IAR*, 1971-72, p. 48. Later on this temple was identified as the *nāga* shrine.

159. Stuart Piggot, *op. cit.*, p. 46 [Hsuan-Tsang says that "to the north of the Sangharama, in a cavern (or between two high banks), is a stone house about 20 feet high and 30 feet wide. It is filled with small wooden tokens (slips) four inches long. Here the honourable Upagupta preached; when he converted a man and wife, so that they both arrived at (confronted) the fruit of Arhatship, he placed one slip (in this house). He made no record of those who attained this condition if they belonged to different families or separate castes (tribes)".] Beal, *op. cit.*, Bk. IV, p. 182.

160. *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 96.

161. *IAR*, 1969-70, p. 44.

162. According to one count, out of the 498 canonical *Jātakas*, 416 are said to have been recounted by Buddha at this place. A.N. Bose, *Social and Rural Economy of Northern India*, Vol. I, 1970 (3rd edition), p. 204.

said that since this town was established by king Srāvasta or Srāvastaka, the place came to be known as Śrāvastī.[163] Most of the Buddhist texts mention this place as the capital of Kośala. But according to the Jain sources, Sāvathī or Kuṇālanayarī was the capital of Kuṇāla, one of the twenty-five and a half Aryan countries. It is also suggested that it was the birth place of the third Titthayāra who received his first alms here. The place was visited by several Jaina preachers, including Mahāvīra.[164] Śrāvastī also finds mention in the accounts of Fa-hsien and Hsuan-Tsang.[165]

The location of the ancient city of Śrāvastī was identified by Cunningham with the ruins at Sāhet-Māhet on the bank of the Rāptī. The place is situated between Akona and Balram at a nearly equal distance from Bahraich and Gonda.[166] W. Hoey, however, suggested that Seṭ alone represents a corrupt form of Sāvathī. He was also of the view that Sapolis mentioned by Ptolemy, represents Śrāvastī.[167] Vogel on the other hand was of the opinion that Sāhet-Mahet were two different sites, separated by a distance of ½ mile from each other, and that Māhet represents the site of an ancient city.[168] However, at another place Vogel remarked that "I doubt whether it is quite correct to say that it is a town all complete in itself . . . It would be perhaps most correct to call Māheth an akropolis—the fortified inner city containing, besides the palace, a number of temples and other religious monuments, tanks, barracks and bazars. It may be compared with the Qila of the Mohammadan period".[169] K.K. Sinha, however, calls Māhet as the "city site".[170] In fact, the twin names of Saheth-Maheth denote two groups of remains. Saheth represents the famous Buddhist monastery, known as the Jeṭavana-vihāra and Maheth the ruins of the ancient city of Śrāvastī.[171]

K.K. Sinha observed during the excavations at Śrāvastī that "there was only a sporadic habitation in the city area after the 1st century A.D. as attested to by 1959 excavation, and the occupation during Period II came to a close towards the beginning of the Christian era and with that the city seems to have lost its metropolitan character. After some gap, the site continued as an important religious centre".[172] However, there is enough evidence to show that the city continued to flourish during the early centuries of the Christian era when the Kuṣāṇas mastered the entire Gangetic valley. Several inscriptions and coins belonging to the Kuṣāṇa period, as well as structural remains discovered from Śrāvastī leave no doubt that it still continued to attract large number of Buddhist devotees.

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[163] *Memoirs of the Archaeological Survey of India* (*MASI*), No. 50, p. 6.

[164] J.C. Jain, *op. cit.*, p. 332.

[165] Legge, *op. cit.*, ch, XX, pp. 55-61; Beal, *op. cit.*, Bk. IV, pp. 1-13.

[166] *ASIR Cunningham*, I, p. 331; Cunningham's *AGI* pp. 344-45.

[167] *Journal of the Asiatic Society of Bengal*, Vol. LXI, pt. I, 1892 (Extra number), p. 3. [Hoey was of opinion that Seṭ-Mahet has been erroneously supposed to be a rhyming word, formed according to common use on the analogy of *Ulṭā-pulṭā* (उल्टा-पुल्टा) and similar words.] Set-Met is used in common talk even these days denoting the meaning of झूठ-मूठ.

[168] *ASI—AR*, 1907-08, p. 84.

[169] *Ibid.*, p. 90.

[170] K.K. Sinha, *Excavations at Śrāvastī* (1959), Varanasi, 1967, p. 6.

[171] *AI*, no. 9, p. 144; M. Venkataramayya, *Śrāvastī*, Department of Archaeology, India, 1956, p. 2.

[172] K.K. Sinha, *op. cit.*, pp. 6, 11.

Inscriptional evidence suggests a close contact of Śrāvastī with other contemporary towns like Mathurā and Sāketa. Cunningham discovered here an inscribed figure of the Buddha which was imported from Mathurā. The inscription read as the "accepted gift of the Śrāvastī *dana* teachers of the Kośamba hall". The characters of this inscription compared well with the inscriptions of Mathura belonging to the beginning of the Christian era.[173] It may be presumed therefore that the inscription on the Buddha figure, discovered at Śrāvastī belonged to the Kuṣāṇa period, indicating thereby close contacts between Mathurā and Śrāvastī. Subsequent excavations also brought to light seals and inscriptions of the Kuṣāṇa period. Vogel discovered during the excavations of 1907-08, some clay sealings and one seal die, with legends in the Brāhmī character of the Kuṣāṇa type.[174] Marshall's excavations (1910-11) also exposed two important inscriptions of the Kuṣāṇa period which attest connections with Mathurā and Sāketa. One of these inscriptions was inscribed on a broken pedestal the script being of the early Kuṣāṇa period. It informs that two Kṣatriya brothers, one of whom was Śivadhāra set up this statue in the Jeṭavana of Śrāvastī and that the statue was carved by a sculptor of Mathurā.[175] The other inscription was engraved on the statue of Buddha with scripts in the late Kuṣāṇa characters. It recorded "the pious gift of Sihadeva, a Pravārika of Sāketa (Sāketakasya)". Although the inscription does not refer to Mathurā, but the style of the sculpture clearly demonstrates it to be of later Mathurā school. Moreover, a sculpture preserved in the Mathurā museum resembles so much with the above inscribed image that both appear to have been carved by the same sculptor.[176]

Some other inscriptions were also found at Śrāvastī. An inscribed bowl was discovered from the relic chamber of stūpa no. 18, assigned to the Kuṣāṇa period. The inscription was in the Kuṣāṇa characters and recorded the "gift of the venerable Buddhadeva".[177] Other inscriptions discovered at Śrāvastī are an inscribed pedestal of red Mathurā sand stone which informs that the statue was presented by a nun named Rājī,[178] and the Sāhet-Māhet Stone Umbrella Staff Inscription of Kaniṣka which records the setting up of a Bodhisattva with an umbrella and shaft at Śrāvastī in the Kośamba Kuṭī by the monk Bala on the 19th day in the month and year (mutilated) of Mahārāja Devaputra Kaniṣka.[179] Thus a number of inscriptions discovered from Śrāvastī suggest that the city, which was an important religious centre, continued to flourish under the Kuṣāṇas and that it had close connection with Mathurā as well as Sāketa.

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[173] *ASIR—Cunningham*, I, pp. 339-40.

[174] *ASI—AR*, 1907-08, pp. 93-95.

[175] *Ibid.*, 1910-11, p. 11; *ASI—AR*, 1908-09, p. 133.

[176] *Ibid.*

[177] *Ibid.*, p. 15. (*Bhadamatasya Buddhadevasya dānaih.*)

[178] *Ibid.*, p. 16.

[179] D.C. Sircar, *Select Inscriptions Bearing on Indian History and Civilization*, Vol. I, Calcutta, 1942, No. 44. Cf. *Epigraphia Indica*, Vol. VIII, p. 180. Sircar also ascribes No. 45 (Set-Mahet Buddhist Image Inscription) to Kaniṣka I.

Other evidence also demonstrate that Śrāvastī was a prosperous city during the Kuṣāṇa period. Many important structural remains of the Kuṣāṇa period were discovered here. It has been suggested that no building discovered here could be regarded as earlier than the Kuṣāṇa times and many were much later.[180] Marshall's excavations exposed remains of concrete road, monasteries, courtyards, cells, drain and several chambers of the Kuṣāṇa period.[181] Numismatic evidence also suggests the strong-hold of the Kuṣāṇas at Śrāvastī. Marshall noticed during the course of his excavations, a small jar in one of the cells of a monastery which contained 105 copper Kuṣāṇa coins, belonging to Kaniṣka, Huviṣka and Vāsudeva. Copper coin of Kaniṣka was also discovered here.[182] A large number of beads of gold, and various stones along with large pearls were discovered from the relic chamber of a stūpa belonging to the Kuṣāṇa period. This collection of beads and pearls was considered to be one of the largest so far discovered from any *stūpa* in India and could compare well with the remains discovered at Piprahwā.[183] Thus, taken together, all the evidence strongly suggests that Śrāvastī flourished as a great religious town under the Kuṣāṇas.

Another important Kuṣāṇa town situated in Uttar Pradesh was Ahicchatra. The ruined fortress of Ahicchatra was taken by Cunningham to suggest that it represented the ruins of the ancient city of Ahicchatra.[184] The place is situated in Bareilly district of Uttar Pradesh, at a distance of 7 miles north of Aonala and about ½ mile to the north-east of Ramnagar.

Traditionally this place is considered to be very old and important. The antiquity of Ahicchatra can be traced back to the *Śatapatha Brāhmaṇa* where the place is mentioned as Parichakra, suggesting thereby that the place was founded on a circular site or that its name was derived from some circular object.[185] It was the kingdom of north Pāñchāla. According to the *Mahābhārata*, the place was snatched by the Kurūs who snatched it from the Pāñchāla king and gave it to Droṇa. The name Ahicchatra; meaning "the canopy of serpents", has given rise to many folk-tales about the kings and religious teachers supposedly protected by serpents here.[186] Hsuan-Tsang also noticed here a *Nāga* tank outside the town and a *stūpa* by its side built by Aśokarājā.[187] The Jaina texts inform us that Ahicchatra was the capital of Jāṅgala, a country included among the twenty-five and a half Aryan countries. It is mentioned as a holy place along with Atthavaya, Ujjinta, Dhammacakka and Rāhavatta. It is said the Pārśvanāth was worshipped here by Dharānendra. Another Jaina text, the *Vividhatīrthakalpa*, calls Ahicchatra as Śaṅkhavai. The place was also known as Pratyāgraratha or Śivapurī.[188]

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[180] *Archaeology in India* (Bureau of Education, India, No. 66), p. 69.
[181] *ASI—AR*, 1910-11, pp. 7-15.
[182] *Ibid.*, p. 16.
[183] *Ibid.*
[184] Cunningham, *A.G.I.*, p. 304.
[185] *MASI*, No. 67, p. 3.
[186] *AI*, no. 1, p. 37.
[187] S. Beal, *op. cit.*, Bk. IV, p. 200.

Although Ahicchatra traditionally dates back to the *Mahābhārata* times, no prehistoric antiquarian remains have been discovered here. Hence any attempt to connect this city with the *Mahābhārata* should be regarded as premature.[189] The place remained in continuous occupation since 300 B.C. or somewhat an earlier period to A.D. 1100. The excavations have revealed here various strata of dwelling-houses, streets and brick temples. Altogether nine strata, dating from pre-300 B.C. to A.D. 1100, were exposed here.[190] The Kuṣāṇa occupation of this city is confirmed by the numismatic, ceramic and terracotta evidence. Stratum IV (A.D. 100-350) was marked by the appearance of Kuṣāṇa coins. Its last stage contained imitation of Kuṣāṇa coins.[191]

Apart from numismatic evidence, pottery assigned to the Kuṣāṇa period was also discovered from strata IV at Ahicchatra.[192] Moreover, several blocks of single contiguous chambers, made of fine brickwork and generally having a bed of rammed concrete, was noticed from this stratum. This period represented the most prosperous period as far as the building activity is concerned in the city.[193] This stratum also contained terracotta figurines of dwarfs, a characteristic type of the Kuṣāṇa period. The figurines of dwarfs were noticed more prominently in sub-stratum IVC (A.D. 100-200). Many such figurines were also discovered at Mathurā, belonging to the same chronological horizon.[194] Moreover, several votive tanks make their first appearance at Ahicchatra during period A.D. 100-200.[195] An inscribed Buddhist image, having the name of Bodhisattva Maitreya on its pedestal, made of Mathurā red sand stone and stylistically belonging to the Kuṣāṇa period, is another important discovery, suggesting the Kuṣāṇa influence and connections of Ahicchatra with Mathurā.[196] Available evidence, thus, clearly demonstrates that Ahicchatra was a flourishing town in the Kuṣāṇa period.

The mounds at Bhīṭā, situated nearly 12 miles south-west of Prayāga and 35 miles downstream from Kauśāmbī on the bank of the Yamunā, represent the ruins of an ancient city which flourished from the Mauryan times up to the Gupta period. It was also known as Sahjātī.[197] The site was identified by Cunningham as Bitabhya-paṭṭana, a port town which flourished during the life of Mahāvīra and which finds mention in the *Vīra Carita.*[198] According to this text, Bitabhya-paṭṭana was the capital of king Udayan, who had embraced Jainism.[199]

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[188] J.C. Jain, *op. cit.*, p. 264.

[189] *AI*, no. 1, p. 38.

[190] *Ibid.*, pp. 38-40.

[191] *Ibid.*, p. 39. [However in *AI*, no. 9, Kuṣāṇa coins are reported to have been discovered from strata VI (A.D. 100-350) and strata IV (belonging to the 1st century B.C.), p. 140].

[192] *Ibid.*, p. 38.

[193] *Ibid.*, p. 39.

[194] *Ibid*, no. 4, p. 119.

[195] *Ibid.*, p. 125.

[196] *Ibid.*, p. 137. For further details on pottery and terracottas and beads, see ch. IV.

[197] V.K. Mathur, *op. cit.*, pp. 668-69.

The excavations were conducted here by Marshall (1909-10 and 1911-12) who suggested that Bhita represents the site of an ancient military station as well as a mercantile township. The excavations brought to light, apart from other antiquities, tribal and Kuṣāṇa coins, terracotta figurines along with religious and mercantile sealings belonging to the Kuṣāṇa and Gupta periods.[200]

The most important finds suggesting the Kuṣāṇa occupation of this city are a number of sealings inscribed in the Kuṣāṇa characters and the coins belonging to this dynasty. Marshall discovered clay sealings from the structures assigned to the 1st century A.D. One of these sealings, circular in shape and having the design of bow and arrow, as found on the Āndhra coins had legends in the Kuṣāṇa characters. It read as *Gagasa.* Another sealing had the impression of *Swastika* and vase and legend *Na(ṁ)di* in the Kuṣāṇa characters. Still another sealing was engraved with words *Na(ṁ)disa* in the same characters. Marshall also discovered a seal die of ivory having the legend of *Nāgadiasya* in the late Kuṣāṇa script and a clay sealing, with *Swastika* and two other symbols and having the legend of *Ksakasa.* These finds belonged to the late Kuṣāṇa phase.[201] Some seals with scripts in the Kuṣāṇa characters were also found during the course of excavations at Bhita. Two such seals inscribed in the Kuṣāṇa characters and belonging to guilds were noticed from the structures mentioned above.[202] Another seal with inscription *nigamasa* in the Kuṣāṇa script[203] and a Kuṣāṇa seal[204] were discovered here by Marshall. Such a number of seals and sealings, inscribed in the Kuṣāṇa characters and discovered from Bhita makes it clear that the place remained an important trading centre in the Kuṣāṇa period.

Besides, some Kuṣāṇa coins were also discovered from the house of Nāgadeva, assigned to the 1st century A.D. 17 copper coins, belonging to Kaniṣka and Huviṣka, were found here.[205] Moreover, coins of Kadphises II (nos. 6, 7 and 8), Kaniṣka (nos. 9-15) and Huviṣka (nos. 16-33) and two coin moulds, one of them being obverse of a Kuṣāṇa coin and the other, the reverse of a gold coin of Vāsudeva (nos. 34-35)[206] were discovered by Marshall. During the excavations, structural remains of residential houses, a line of shops and a ringwell, belonging to the 1st century A.D. and late Kuṣāṇa epoch[207] as well as terracotta figurines and pottery of the Kuṣāṇa period, including water bottles, water jars, cooking Pots crucible and melting pots with lip in rim for pouring molten metal[208] were discovered at Bhita. The seals and sealings belonging to guilds and artisans along with Kuṣāṇa coins and crucibles suggest that Bhita was an important business and industrial centre as well as a mint town during the Kuṣāṇa period.

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[198] *ASIR Cunningham*, III, pp. 46-52.
[199] B.C. Law, *op. cit.*, p. 122.
[200] *AI*, no. 9, p. 146.
[201] *ASI—AR*, 1911-12, p. 34.
[202] *Ibid.*, p. 36. Seal nos. 57-59.
[203] *Ibid.*, p. 40. Seal no. 58; see also K.K. Thaplyal, *Studies in Ancient Seals*, Lucknow, 1972, p. 224.
[204] *Ibid.*, p. 41. Seal no. 71.
[205] *Ibid.* p, 34.
[206] *Ibid.*, p. 42.
[207] *Ibid.*, pp. 34-39. For further details of structures, see ch. III.

Kauśāmbī was another important Kuṣāṇa town of the Gangetic valley. The *Śatapatha* and *Gopatha Brāhmaṇas* use the word Kauśāmbeya as an epithet of a person hailing from Kauśāmbī. This reference implies that Kauśāmbī existed as early as the period of the *Brāhmaṇa* literature or the later Vedic age. Several references bearing on Kauśāmbī are to be found in the Pālī cancns. The antiquity of this city is similarly proved by its mention in the Epics, the *Purāṇas*. the *Vaṁsatthappakasinī*, a commentary on the *Mahāvaṁśa*,[209] and the *Mahābhāṣya* of Pātañjalī, composed about 150 B.C.[210] Kauśāmbī is also mentioned in the Jain texts[211] and in the accounts of the Chinese pilgrim, Hsuan-Tsang.[212] In Ceylonese texts Kauśāmbī is mentioned as one of the 19 capital cities of ancient India.[213]

Different traditions exist about the origin of the city of Kauśāmbī. According to the *Paramatthajotika*, the place came to be known as Kauśāmbī because it was originally the dwelling-place of sage Kośamba. The Jain tradition asserts that Kauśāmbī derived its name from the fact that there were abundant large-sized Kośamba trees providing cool shade.[214] Similar other legends also exist regarding the origin and name of this city.

The ancient city site of Kauśāmbī, situated nearly 32 miles south-west of Allahabad, on the left bank of Yamunā, is represented by massive mounds of ruins, presently enclosed by the villages of Kośam Khirāj, Garhwā, Kośaminām and Anwān-Kuwān. The word Kośam seems to be a corrupt form of Kauśāmbī-Kośāmbī and Garhwa may be taken to suggest a fort. Thus, the names of the two villages, Kosam and Garhwa, suggest that the ancient Kauśāmbī was a fortified town.[215]

The large scale excavations conducted here by Allahabad University under G.R. Sharma, have brought to light significant evidence bearing on the Kuṣāṇa hold over this city in the shape of structural remains, coins, inscriptions, seals and sealings, pottery, terracotta figurines and other miscellaneous objects. The Kuṣāṇa levels at Kauśāmbī, on archaeological grounds, have been dated to

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208. *ASI-AR*, p, 83.
209. B.C. Law, *MASI*, No. 60, p. 1.
210. Kane, *op. cit.*, p. 39. *The Mahābhāṣya*, Vol. I, p. 216. (on Pāṇinī gives two instances; *niṣkauśāmbih* and *nirvāraṇasīh*, in the sense of one who has gone out of Kauśāmbī or Vārāṇasī.
211. J.C. Jain, *op. cit.*, pp. 300-01.
212. Beal, *op. cit.*, Bk. V, pp. 235-39. See also, G.R. Sharma, *The Excavations at Kauśāmbī* (1959), Allahabad, 1960, p. 25.
213. *ASIR Cunningham*, I, p. 301;
214. H. Chakrobarti, *op. cit.*, p. 173; *MASI*, No. 60, pp. 3-5.
215. G.R. Sharma, *op. cit.*, *MASI*, No. 74, p. 1. See also, *IAR*, 1953-54; 1954-55; 1955-56; 1956-57; and 1957-58.

A.D. 25-100. On the other hand the Radiocarbon calculations assign it to A.D. 50-125. The latter evidence, thus, clearly suggests that the Kuṣāṇas held sway here during the 2nd half of the 1st century A.D. and first half of the 2nd century A.D.[216] The sub-period V (A.D. 25-100), corresponding to the layers 5 and 4 at Kauśāmbī, are significant for the fact that it was during this period that Kauśāmbī witnessed the Kuṣāṇa invasion. This period has yielded sufficient evidence in the shape of coins and seals belonging to the Kuṣāṇas, suggesting thereby the Kuṣāṇa occupation of Kauśāmbī. The sub-period VI, which yielded the Kuṣāṇa coins along with those of the king Neva and the Magha rulers, suggests, that during this period the Kuṣāṇas were ousted from Kauśāmbī by the kings of the Magha dynasty.[217]

The material relics discovered from Kauśāmbī in the shape of structural complex pottery, terracotta figurines, beads, metal objects, numismatic and epigraphic evidence, all tend to suggest that it was a flourishing town in the Kuṣāṇa period. During the excavations were exposed the remains of a well-planned city, characterized by brick-built residences, with provisions for roads, lanes, bye-lanes and several devices for draining out refuse water.[218] The city had also a well-built fortification. The pottery discovered from this period had a wide range of distribution—in east up to central Gangetic valley and in the west and north up to Soviet Central Asian Republics. The fabric was generally red and the types consisted of *surāhīs* or spouted vessels.[219] Similarly, the terracotta figurines of this period introduce new ethnic types which resemble very much the Kuṣāṇa features and occurs in the figures on the Kuṣāṇa coins.[220] Other finds from the Kuṣāṇa level at Kauśāmbī include objects of iron, copper, ivory, shell, stone, glass, terracotta, and a large number of crucibles.[221]

But by far the most important evidence of the Kuṣāṇa hold over Kauśāmbī is supplied by epigraphic and numismatic evidence. The Buddhist Image inscriptions of Buddhamitra of the years 2 and 3 (?) of Kaniṣka and a fragmentary inscription of Vaśiṣka discovered from village Garhwā, suggest that Kauśāmbī remained a Kuṣāṇa centre during the reigns of Kaniṣka and Vaśiṣka.[222] Another inscription discovered from the Ghoṣitarāma monastery, recording the erection of a Bodhisattva by Buddhamitra in the year 6, may be assigned to Kaniṣka.[223] Apart from these inscriptions, some seals and sealings of the Kuṣāṇa period were discovered at Kauśāmbī. Of these, the most important was the sealing of Kaniṣka. The impression of double strings in the lug clearly indicates that the sealing was affixed to some royal document. The inscription on this sealing reads : "in the service of

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216. *MASI*, No. 74. pp. XXI-XXII.
217. *Ibid.*, pp. 19-20.
218. *Ibid.*, pp. 24-26. For further details, see ch. III.
219. *Ibid.*, pp. XVII-XVIII. For further details, see ch. IV.
220. *Ibid.*, p. 53. For further details, see ch. IV.
221. *Ibid.*, pp. 93-98. For further details, see ch. IV.
222. *Ibid.*, p. 10.
223. *CAKP*, I, pp. 15-17.

Mahārājā Rājātirāja Devaputra Kaniṣka".[224] Some other Kuṣāṇa seals and sealings were also discovered here. It is interesting to note in this connection that most of the symbols occurring on these seals and sealings are noticed on contemporary coins also. It is likely, therefore, that these seals were prepared by those very persons who minted coins also.[225] This may be taken to suggest some minting activity at Kauśāmbī during the Kuṣāṇa period.

Some Kuṣāṇa copper coins were discovered in the excavations at Kauśāmbī. These coins were mixed with other coins in hoards. The first hoard, consisting of 54 coins, contained five Kuṣāṇa coins—Kaniṣka (one), Huviṣka (three), and Vāsudeva (one). The second hoard of 136 coins had only a thin copper coin, engraved with the letter *ma* of the Kuṣāṇa period. The third hoard contained a total number of 171 coins, all of which, except four, belonged to the rulers of the Magha dynasty. The occurrence of a few Kuṣāṇa coins in contrast to the large number of Magha coins suggests that the Kuṣāṇa coins had ceased to be in circulation during the rule of the Maghas. But the coins of Huviṣka and Vāsudeva may be taken to suggest that the Kuṣāṇas ruled Kauśāmbī even after Kaniṣka during the reigns of these kings.[226] Thus, all the evidence taken together, makes it clear that Kauśāmbī formed a part of the Kuṣāṇa empire and flourished as a city under the Kuṣāṇas.

Piprahwā in the district of Basti in Uttar Pradesh has revealed some structures belonging to the Kuṣāṇa period. These include a structure very much similar to a monastery with as many as 17 rooms, built of well burnt-bricks, assigned to the 2nd-3rd centuries A.D.[227] An extensive floor of baked bricks, which might have served the purpose of a public hall, belonged to the Kuṣāṇa period because such floors have also been noticed at Purānā Quilā, Atrañjīkherā and Ahicchatra in the corresponding chronological horizons.[228] However, other evidence bearing on Kuṣāṇa history is lacking at Piprahwā, except the discovery of some seals engraved in the Kuṣāṇa characters. The discovery of such seals from Piprahwā may suggest the influence of the Kuṣāṇas here. But it is difficult to say at the present stage of our meagre knowledge, whether it was an urban or rural settlement. Much depends upon the exact identification of this site.

Lately, great controversy has arisen over the identification of this place. K.M. Srivastava suggests that Piprahwā represents the ancient city site of Kapilavastu, the capital of the Śākya king Suddodhana which has been eulogised too much for its splendour and prosperity in the Buddhist texts like the *Buddhacarita*, *Saundarānanda*, *Lalitavistara*, etc. His views were based on the following facts. Firstly, Peppe discovered in 1898 an inscribed casket from Piprahwā, which contained the relics of the Buddha. Secondly, Fa-hsien's statement that Lumbinī should be 9 miles east of Kapilavastu corresponds well with the location of Piprahwā. Finally, from Piprahwā were discovered many seals with inscriptions reading "*Om Devaputra Vihāre*", "Kapilavastu", "*Bikhu Saṅghas*", and the lid of a pot inscribed with the word "Kapilavastu". Srivastava also exposed here the palace of the Śākya king Suddodhana in which the Buddha spent his life before his *mahabhiniṣkramaṇ*.[229]

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[224] *MASI*, No. 74, p. 79; *CAKP*, II p. 17. The inscription was of four lines:
"1. (M)ahārājasya rājāti-
2. rājasya deva-putrasya-
3. Kaniṣkasya prayo-
4. ga."

[225] *CAKP*, p. 78. See also pp. 78-81 for a description of other seals and sealings.

[226] *Ibid.*, pp. 82-84.

[227] *IAR*, 1970-71, p. 72.

[228] *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 98.

The archaeologists of Nepal, however, term the views of the Indian scholar as "rank propaganda". According to them "the terracotta seals inscribed with the Brāhmī script belonging to the 6th-7th centuries subsequent to the *Mahāparinirvāṇa* of Lord Buddha is no decisive factor in the determination of the identity of a place. . . ."[230] The Nepalese archaeologists think that mere discovery of seals, which are mobile in nature, should not be taken as a conclusive proof in identifying the ancient city of Kapilavastu.[231] They think that Tilaurakoṭ near Taulihawā in Nepal represents the ancient site of Kapilavastu. One of the Nepalese scholars goes to the extent of conceding that Piprahwā was a part of Kapilavastu, but not the capital town itself.[232]

It may be pointed out here that the discovery of seals in the Kuṣāṇa characters with the expressions "Kapilavastu" and "*Devaputra Vihāre*" cannot be taken as chance recovery only. We know that the title "*Devaputra*" was used by the Kuṣāṇas. Since the Kuṣāṇas were the champions of Buddhism and Kapilavastu was the place where the Buddha spent a major part of his youth, the place became one of reverence for the Buddhists. It is just possible that Kaniṣka who largely used the title of the "Devaputra" built a Vihara at Kapilavastu to show his reverence to the Buddha. In these circumstances, the discovery of the relic casket, monastic complex and seals, bearing the words "*Devaputra Vihāre*" as well as "Kapilavastu", from Piprahwā, unmistakably suggests that it represents the site of ancient Kapilavastu.

Ayodhya or Sāket, situated in Faizabad district of Uttar Pradesh, was another important ancient town. The place finds its first mention in the *Brāhmaṇa* literature, but as a village.[233] The *Rāmāyaṇa* preserves the tradition that Ayodhya was founded by Manu and served as the capital of king Dasaratha. It was fortified with towers and gates and surrounded by deep ditches. The *Mahābhāṣya* terms it as Sāketa.[234] The Jaina text *Vividhatirthakalpa* gives the synonyms of Ayodhya as Vinitā, Sāketa, Ikṣvākubhūmī, Rāmapurī and Kośala. According to this work Ayodhya was 12 *yojanas* long and nine *yojanas* broad. The place was also known to Ptolemy who calls it Sogeda.[235] Kālidāsa portrays a very lively picture of the city in his *Raghuvaṁśa*. The place was visited by the Chinese pilgrims who call it "Sha-che" and "O-Yu-To" respectively.[236]

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[229] K.M. Srivastava, *The Illustrated Weekly of India*, May 16, 1976, pp. 25-27. See also *The Times of India*, January 24, 1976; *Indian Archaeology—A Review* (1970-71); *The Puratattva*, Vol. VI (1972-73); *Dharamayug*, May 1973 and *Kadambini*, May 1976. In a recent article in *Dharamayuga*, May 1, 1977, pp. 34-35. Dr Balram Srivastava also thinks that Piprahwā represents the ancient site of Kapilavastu.

[230] *Tilaurakot, the Ancient City of Kapilavastu*, Department of Archaeology, His Majesty's Government, Nepal, Buddha Jayanti Celebration Committee (2520), Nepal, p. 4. For similar other views see also *Voice of History* (Journal of History Instruction Committee), Tribhuvan University History Association, Kirtipur, Vol. II, 1976, pp. 97-127.

[231] *Ibid.*, p. 4.

[232] *Voice of History*, p. 126.

[233] *Journal of the Ganganath Jha Research Institute* August,1944, p. 423.

The excavations so far conducted at Ayodhya are not extensive, but on the basis of some cuttings it may be suggested that the site remained in habitation since the NBPW phase.[237] Although the chronological stratification of the massive brick structures at Kubera Ṭīlā has not been made, it perhaps belonged to the Kuṣāṇa period.[238]

Another ancient town situated in Uttar Pradesh is Banaras, one of the most celebrated towns in the Indian literature. In the *Jātakas* it is often mentioned as a great commercial, educational and religious centre. A number of *Jātaka* stories allude to the wealth and culture of Banaras in ancient times.[239] Other early Indian texts like the *Mahābhāṣya*, the *Miliñdapanho* and the *Lalitavistara* indicate the prosperity of the ancient city of Banaras.

The geographical location of Banaras, situated on the bank of the Gaṅgā and having connections with Vaiśālī in the north by land route and Kauśāmbī in the west by water route, accorded it some economic significance. It virtually became an important business centre where various routes, connecting it with the famous port of Tamraliptī in Bengal concurred. This commercial importance of the place remained undiminished in the early centuries of the Christian era.

The ancient site of Banaras has been identified with the ruins of Rājghāṭ, on the north-eastern outskirts of the present city of Vārāṇasī. On the north and north-east flows the river Barṇā, while on the west and north-west the place is surrounded by a steep depression, believed to be an old bed of river Barṇā. On the south-west flows the Gaṅgā.[240] The mound at Rājghāṭ, fortified on all directions, is traditionally famous as the fort of Rājā Bānar, after whom the city was named as Banaras. A sealing inscribed in the Gupta characters, reading as "Bārāṇasya-adhisthan-adhikaraṇasya", meaning thereby "(the seal) of the city administration of Banaras", was discovered from Rājghāṭ.[241] The discovery of this seal has convincingly proved that Rājghāṭ represents the site of the ancient city of Banaras.

The excavations at Rājghāṭ brought to light several structures of burnt bricks from stratum IV which has been assigned to the Kuṣāṇa and early Gupta periods. Altogether five phases of structural remains were excavated.[242] The nature of the structures makes it clear that they could exist in an urban centre only.[243] The other finds, reflecting the Kuṣāṇa influence over Rājghāṭ, include the typical Kuṣāṇa pottery, votive tanks and many seals inscribed with "Pushamitra" or "Agnimitra" in the characters of the 1st century A.D. Another seal, with name Puṣkaraṇa or Puṣkarata in the characters of the 2nd-3rd centuries A.D., was also discovered.[244] In addition to these some sealings, belonging to ministers and state officials and assigned to the late Kuṣāṇa and early Gupta periods, were discovered at Rājghāṭ.[245] Moreover, two Kuṣāṇa coins were also discovered from here.[246] It appears thus, that Rājghāṭ continued to flourish as an administrative and commercial centre during the Kuṣāṇa period. This becomes more possible in the light of the discovery of an inscription of Kaniṣka at Sārnāth, mentioning the names of Kharapallana and Vanaspara, the governors of Banaras.

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[234] P.V. Kane, *op. cit.*, p. 42.

[235] *Journal of the Ganganath Jha Research Institute* 1944, p. 423.

[236] Legge, *op. cit.*, ch. XIX, pp. 54-55; Beal, *op. cit.*, Bk. V, pp. 224-29.

[237] *IAR*, 1969-70, p. 40.

[238] *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 98.

[239] *Jātaka*, nos. 1, 5, 318, etc.

[240] *IAR*, 1957-58, p. 50.

[241] *ABIHI*, Vol. III (1904), p. XIII.

It seems that the neighbouring town of Sārnāth, an important Buddhist centre, also flourished as a town under the Kuṣāṇas. From here was dicovered the Sārnāth inscription of Kaniṣka, dated in the year 3 of the ruler. It records the dedication of an inscribed Bodhisattva statue and an umbrella with a post by Friar Bala along with Mahākṣtrapa Kharapallana and Kṣatrapa Vanaspara at Banaras, where the Lord used to walk, on the 22nd day, the third month of Hemanta season in the year 3 of Mahārājā Kaniṣka.[247] The dedication of a statue by the Mahākṣatrapa and Kṣatrapa of Banaras at Sārnāth, makes it clear that Sārnāth was included in the boundary of the Kuṣāṇa empire and that it flourished as a religious town under the Kuṣāṇas. This fact is further corroborated by the monastic remains belonging to the Kuṣāṇa period[248] and the discovery of a copper coin of Huviṣka.[249]

Antiquities belonging to the Kuṣāṇa period were also noticed at Mason,[250] situated at a distance of nearly 22 miles from Banaras in the district of Ghazipur. The site is also known as Masaon-Dīh and is spread over a large area of nearly 450 × 250 metres.[251] Cultural deposits belonging to four phases, covering the period from 600 B.C. to A.D. 600, were excavated here.[252] On the basis of finds, period

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[242] *ABIHI*, However, according to *IAR*, 1957-58, six periods of human occupation ranging from the 6th-5th centuries B.C. to the 17th century A.D. were exposed at Rājghāṭ.

[243] For details about structures, see ch. III.

[244] *IAR*, 1957-58, p. 50.

[245] *ABIHI*, Vol. III (1940), p. XXVII.

[246] *IAR*, 1964-65, p. 45.

[247] *EI*, VIII, pp. 173-77; D.C. Sircar, *op. cit.*, nos. 37-39.

[248] *ASI—AR*, 1919-20, p. 26; 1928-29, p. 97.

[249] *Ibid.*, p, 95.

[250] Professor R.S. Sharma suggests that the correct name of the place is Mason and not Masaon, as reported in *IAR* (1964-65, p. 43) which means deserted. The massive mounds spread over a large area point to the remains of a town near the bank of the Gaṅgā. *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 104, fn. 59.

[251] *IAR*, 1964-65, p. 42.

[252] *Ibid.*

III of the site (A.D. 100-200)[253] may be termed as the Kuṣāṇa phase. From this phase were excavated brick-built structures showing the remains of rooms, brick floorings, drain and road.[254] The structural remains suggest the urban nature of habitation at Mason. The excavations also brought to light red ware pottery of the Kuṣāṇa period. The prominent types noticed were sprinklers[255] and large storage jars.[256] Other notable finds from this phase include terracotta figurines,[257] votive tanks, objects of copper, beads, inscribed seals and sealings,[258] and Kuṣāṇa copper coins.[259] All this may be taken to suggest that Mason was a flourishing urban site in the Kuṣāṇa period.

However, it is difficult to determine precisely whether Sohgaura in Gorakhpur district was an urban or rural settlement due to paucity of material. It may be pointed out here that the site has yielded stamped pottery, comparable to those found from Hastināpura IV and a terracotta figure marked by foreign features. Some brick structures, ring-wells, and the coins of the kings of Ayodhya and Pañcāla and of the Kuṣāṇa were noticed here. The most significant of all these finds are the coins. They must have come here through trade. This may be taken to suggest that Sohgaura served as a trading centre during the Kuṣāṇa period. The location of the place, on the borders of India and Nepal, further confirms this hypothesis.

Similarly at Kasia (Kuśīnagara) nearly 35 miles east of Gorakhpur in Uttar Pradesh, which has been identified with Kuśīnagara[260] where the Buddha got his *parinirvāṇa*, some structures assigned to the Kuṣāṇa period were noticed. These structures were of religious nature.[261] Some Kuṣāṇa coins were also found here.[262] Moreover, a fragment of an inscribed stone datable to the time of Kaniṣka was also discovered here.[263] These finds tend to suggest that Kuśīnagara, after the death of the Buddha must have attracted the attention of a large number of religious pilgrims, converting it into a religious town and that it continued to be revered as such during the Kuṣāṇa period.

The archaeological excavations, before and after Independence, have brought to light a number of sites with rich Kuṣāṇa antiquities in Bihar. They include

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[253] *IAR*, 1964-65, p. 43.

[254] *Ibid.*, p. 43; 1965-66, p. 52; 1967-68, p. 47; 1970-71, p. 76. See also ch. III for further details.

[255] *Ibid.*, 1964-65, p. 43.

[256] *Ibid.*, 1965-66, p. 51.

[257] *Ibid.*, See also 1964-65, pp. 67-68.

[258] *Ibid.*, See also 1967-68, p. 47.

[259] *Ibid.*, 1964-65, p. 43 and 1965-66, p. 51.

[260] Cunningham, *A.G.I.*, pp. 363-65.

[261] *ASI—AR*, 1904-05, pp. 45-51; *ASI Central Circle*, 1905, pp. 40-41; *ASI—AR*, 1905-06, pp. 61-74 and *ASI Central Circle*, 1907, p. 19. For further details of structures, see ch. III.

[262] *ASI—AR*, 1904-05, p. 51; *ASI Central Circle*, 1905, p. 41. A total number of 12 copper coins of the Kuṣāṇas were discovered from the debris of a house. These included 4 issues of Kadphises II and 8 of Kaniṣka.

[263] *ASI Central Circle*, 1907, p. 19.

Chirand and Vaiśālī in north Bihar, Kumrahār (Patna), Carittarvan (Buxar), Sonpur (Gaya district) and Saradkel (Ranchi district) in South Bihar.

Chirand is situated about 8 kms east of Chhapra, near Dorīgañj Ghāṭ, an important ferry place in North Bihar. Several attempts have been made to identify Chirand with some ancient place known to literature or tradition. Dr. Hoey, long ago, attempted to equate this place with the ancient city of Vaiśālī.[264] N.L. Dey also held the view that Chirand might be identified with the ancient Kuṭagāra or Mahā-Vana Kuṭagāra, the northern suburb of Vaiśālī.[265] Both the views, however, are unacceptable on account of the identification of Vaiśālī with Basārh, in Vaiśālī district. The place remains unidentified as yet.

However, a fresh attempt at the identification of Chirand may be made here on the basis of the accounts of the Chinese pilgrim Hsuan-Tsang. The pilgrim says that from the kingdom of Chen-chu (Ghazipur), going east about 200 *li* he arrived at a *saṁdhārāma* called *O-pi-to-kie-la-na*. From here, after travelling a distance of nearly 100 *li* south-east and after crossing the Gaṅgā he came to the town of *Mo-ho-sa-lo* or Mahasāra.[266] From here the pilgrim crossed the Gaṅgā and came to the temple of *Na-lo-Yen* or Nārāyaṇa Deva.[267] Unfortunately Hsuan-Tsang does not name the place where the temple was situated. Cunningham suggests that the place of the temple was Revelganj, 16 miles north of Mahasāra on the confluence of the Gaṅgā and Ghāgarā.[268] It appears that Cunningham wrongly located the Nārāyaṇa Deva temple at Revelganj. No remains of any such temple is known from Revelganj. On the other hand Chirand is comparatively rich in antiquities, rather one of the richest sites in Bihar as regards antiquarian remains. Here a Buddhist *stūpa* was also excavated. In these circumstances it appears that most probably Hsuan-Tsang visited Chirand and not Revelganj after crossing the Gaṅgā. It was from here that the pilgrim went to Vaiśālī via Dīghwārā, as suggested by Cunningham.[269] Similarly it is more likely that the Chinese pilgrim crossed the Gaṅgā, not at Mahasāra, an unknown place, but at Maner near Patna from where recent explorations exhibit the sign of habitation, as early as the early centuries of the Christian era.[270] It is also interesting to note in this connection that both Maner and Chirand are situated opposite each other, separated by the Gaṅgā. Thus in all likelihood Chirand was visited by Hsuan-Tsang, but what prevented him from mentioning its current name is beyond comprehension.

However, the excavations at Chirand make it crystal clear that it represents the site of an ancient town. This place is also familiar as "Cherund", a word which has been derived from the "Cheros", an ancient ruling race inhabiting the district of Saran.[271] It has also been suggested that the foundations of Chirand were laid by a king named Cheras. Most probably it was the place where king Dasaratha left his body for heaven. Kālidāsa in his *Raghuvaṁśa* calls the confluence of the Ghāgarā and Gaṅgā, which is very close to Chirand, as a holy place.[272]

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[264] *JASB*, LXIX, pp. 74-88.

[265] *Ibid.*, LXXII, pt. I (nos. 1-20), pp. 87-9.

[266] S. Beal, *op. cit.*, Bk. VII, pp. 61-3. The monastery of *O-pi-lo-kie-la-na* has been located at Baliyā (fn. 52) and the town of Mahasāra, at a distance of six miles to the west of Arrah, with a village called Masâr (fn. 58).

[267] *Ibid.*, p. 64.

[268] Cunningham, *A.G.I.*, p. 371.

[269] *Ibid.*, pp. 372-73.

[270] Information about recent explorations at Maner was given to me by the Secretary of the Bihar Purāvida Pariṣad, Patna.

Nearly a decade of excavation at Chirand (1962-73) shows that this site remained under continuous occupation from the neolithic times to the early medieval period. The Kuṣāṇa phase is covered by period IV at the site.[273] This phase has exposed such materials as tend to suggest that Chirand was a flourishing town in the Kuṣāṇa period. From this phase were discovered burnt brick-built residential structures with provisions of bathrooms, and drains and a Buddhist monastery complex[274] was noticed here. The excavations have revealed not only the existence of many crafts (e.g. pottery, metallurgy, working in stone, bone, etc.) at Chirand[275] but have also yielded a hoard of 88 Kuṣāṇa copper coins.[276]

Of the remaining sites, Vaiśālī is the richest in archaeological finds in Bihar. It is one of the most celebrated places in the Buddhist annals and finds mention in the *Jātakas*, the *Mahāvastu*, the *Lalitavistara* as well as in the accounts of the Chinese pilgrims, Fa-hsien and Hsuan-Tsang. It was at Vaiśālī that the Second Buddhist Council was held. Tradition asserts that the place was named after king Viśāla. According to the Buddhist tradition, the place came to be known as such because it was enlarged many times to accommodate the ever-growing population of the city.[277]

Long years of excavation have produced enough evidence to show that Vaiśālī flourished as a city under the Kuṣāṇas. The place was conquered by them in 80 B.C.[278] Spooner's excavation also confirmed the Kuṣāṇa occupation of this city.[279] The excavations of 1950 and 1958-62 brought to light significant material bearing on Kuṣāṇa hold over Vaiśālī. These include massive structures, defence wall, concrete floors, rooms of various dimensions, military barracks, roads, drains, corridors etc. belonging to period III (*c* A.D. 100-300), which covers the Kuṣāṇa phase at

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[271] *Bihar District* [*Gazetteer* (ed. P.C. Roychoudhary), 1960, pp. 470-71; *JBRS*, Vol. XLV, pts. 1-4, March-December 1959.

[272] V.K. Mathur, *op. cit.*, p. 344. However, it is difficult to agree with his views that it was here that the Kumbha-*stūpa* built by a brāhmaṇa named Satyaprakirti existed. It should be looked for at Dīghwārā, as suggested by Cunningham in his *Ancient Geography of India*, pp. 372-73.

[273] *Patna University Journal*, July 1968, Vol. XXIII, no. 3, p. 103.

[274] *IAR*, 1964-65, p. 7; 1962-63, p. 6. For further details, see ch. III.

[275] For details, see ch. IV.

[276] *IAR*, 1968-69, p. 6.

[277] *JBBRS*, II, pp. 481-82.

[278] B.P. Sinha and S.R. Roy, *Vaiśālī Excavations* (1958-62), Patna, 1969, p. 1.

[279] *ASI—AR*, 1913-14, p. 99.

Vaiśālī.[280] The other notable finds are Kuṣāṇa type of pottery like sprinklers,[281] terracotta figurines, characterized by non-Indian faces indicative of the Kuṣāṇa times,[282] large number of beads of semi-precious stones and metal objects.[283] Although the largest number of seals, sealings and tokens discovered belonged to the Gupta times, at least one sealing (no. 26) is assigned to the Kuṣāṇa period.[284] A total number of 9 Kuṣāṇa copper coins were also found, belonging to Wema Kadphises (2), Kaniṣka (3), Huviṣka (3) Vāsudeva or later Kuṣāṇa (1).[285]

Although the structural activity belonging to the Kuṣāṇa times is comparatively less impressive both at Buxar (Charittarvan) and Sonpur in Gaya district, the sites are not bereft of other antiquities belonging to the Kuṣāṇa times. The Period II at Buxar was important for revealing the ceramics of the early centuries of the Christian era. From this level were discovered Kuṣāṇa pottery like sprinklers and terracotta human figurines—characterised by Kuṣāṇa type of head-dress.[286] A large number of Kuṣāṇa coins in a hoard were also discovered here.[287] Similarly, Period III (200 B.C.—A.D. 200) brought to light pottery ascribed to the Kuṣāṇa period, i.e., sprinklers, spouted basins, lid-like inkpot, etc. Some of these had incised and stamped decorations as well.[288] Besides, large number of beads of terracotta as well as semi-precious stones, copper and iron objects, including crucibles[289] and some votive tanks were found at Sonpur.[290]

Another important town which prospered during the Kuṣāṇa period was Pāṭaliputra, the ruins of which have been located at Kumrāhar near Patna. The place finds mention in the Indian literature as well as the Greek and the Chinese accounts. Several excavations conducted at the place have brought to light brick-built structures belonging to the Kuṣāṇa period.[291] A hoard of 43 copper Kuṣāṇa coins was discovered here by Spooner.[292] The excavations of 1951-55 also brought to light seven Kuṣāṇa coins[293] and a broken golden *talisman*, imitating the gold coin of the Kuṣāṇas.[294] Similar golden amulet copying the coin type of Huviṣka was found in a subsequent excavation also.[295] Some terracotta figurines, characterized by typical Kuṣāṇa peaked head-dresses were also noticed at Kumrāhar.[296] Besides, an inscribed sherd with letters *na* and *sa* and a sealing inscribed as *Saghaṣa*, were discovered from Period III (A.D. 100 to 300) from Kumrāhar.[297] These apparently belong to the Kuṣāṇa times. The available evidence thus indicates the stronghold of the Kuṣāṇas over the ancient city of Pāṭaliputra.

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[280] Krishna Deva and Vijayakant Mishra, *Vaiśālī Excavations* (1950) Vaiśālī, 1961, p. 6. For further details, see ch. III.

[281] B.P. Sinha and S.R. Roy, *op. cit.*, p. 40.

[282] *Ibid.*, p. 153.

[283] For further details, see ch. IV.

[284] B.P. Sinha and S.R. Roy, *op. cit.*, pp, 110-21. A curious seal belonging to Ravidāsa was discovered from Vaiśālī. The seal had the emblem of a Persian fire altar, the like of which occurs on the Kuṣāṇa coins from north-western India. *AR-ASI-EC*, 1904, p. 20.

[285] *Ibid.*, p. 132.

[286] *IAR*, 1965-66, p. 11.

[287] B. Chattopadhyaya, *The Age of the Kuṣāṇas—A Numismatic Study*, Calcutta, 1967, p. 238. [The hoard consisted of 354 Kuṣāṇa copper coins, comprising Wema Kadphises (23), Kaniṣka (159) and Huviṣka (172)].

[288] B.P. Sinha and B.S. Verma, *Sonpur Excavations* (1956 and 1959-62), Patna, 1977, pp. 10-13.

[289] For details, see ch. IV.

[290] *PIHC*, XXXIII session, Muzaffarpur, 1972, p. 100.

[291] For details, see ch. III.

[292] A.S. Altekar and Vijayakant Mishra, *Kumrahar Excavations* (1951-55), Patna 1959, p. 10. See also B.P. Sinha and Lala Aditya Narain, *Pataliputra Excavation* (1955-56), Patna, 1970, p. 4.

Antiquities belonging to the early centuries of the Christian era were noticed at Saradkel also, in Khunti sub-division of Ranchi district in Bihar. The evidence of large scale building activity in baked bricks, including a defence wall, was noticed here. The site, which flourished during the early centuries of the Christian era (1st-2nd centuries), has also revealed sprinkler and evidence of working in metals like iron and copper. All this evidence suggests a Kuṣāṇa complex here. The recent excavations at Champā, near Bhagalpur has brought to light interesting evidence regarding the antiquity and history of this famous city. Different traditions regarding the origin of this city are preserved in the *Rāmāyaṇa* and the *Mahābhārata*. The place also finds mention in Pālī, Prākrit and Sanskrit literature. The city was situated on the confluence of the Gaṅgā and Mālinī Chandan or Champā rivers.[298] It was a fortified town where antiquity goes back to 3rd century B.C. or even much earlier.[299] Due to limited nature of excavations details are not available but whatever material has been brought to light suggest it to be a flourishing town in the Kuṣāṇa period. Kuṣāṇa structures as well as redware, terracotta and stone beads were unearthed from the Kuṣāṇa levels here.[300]

Prof. Yogendra Mishra in a recent book suggests that Śvetapur (Chechar) might have been a flourishing town in the Kuṣāṇa period from where Kuṣāṇa coins, including a gold issue of Kaniṣka and a Buddhist image have been discovered.[301] But since no systematic excavation of the site has been made as yet it is difficult to accept his suggestions.

Kuṣāṇa coins and Roman pottery were recovered from Śiśupālgarh also, which most probably repersents the ancient site of Kaliṅganagara, situated near Bhuvaneswar in Orissa.[302] The site remained in occupation from the beginning of the 3rd century B.C. to the middle of the 4th century A.D.[303] Six copper Kuṣāṇa coins, which included one each of Kaniṣka and Huviṣka and four Puri Kuṣāṇa coins were discovered here.[304] Moreover, a gold coin, which was used as a pendant and had the Kuṣāṇa design of a standing king with Brāhmī legends on the obverse and a Roman head with a Roman legend on the reverse, was also discovered.[305] The other important finds include redware pottery, "rouletted ware",[306] iron objects and clay "bullae".[307] These finds are of special significance as they suggest that these must have been imported from some other sites through commercial exchange. The finds from Śiśupālgarh, thus, indicate the Kuṣāṇa hold over this ancient city.

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[293] Altekar and Mishra, *op. cit.*, pp. 10 & 99. These coins belonged to Kaniṣka and Huviṣka.

[294] *Ibid.*, p. 131.

[295] B.P. Sinha and Lala Aditya Narain, *op. cit.*, pp. 4, 12, 52-53.

[296] Altekar and Mishra, *op. cit.*, p. 10. For details see ch. IV.

[297] *Ibid*, pp. 19, 20, 103.

[298] For details see, B.P. Sinha, *Archaeology and Art of India*, Delhi, 1979, pp. 86-90.

[299] *Ibid.* p. 91. See also *IAR*, 1971-72, p. 2; 1972-73, p. 6.

[300] *Ibid.*, see also, B.P. Sinha, *op. cit.*, p. 103.

[301] Yogendra Mishra, *Śvetapur Ki Khoj Aur Uska Itihāsa* (in Hindi), Patna, 1979, pp. 129-47.

[302] *AI*, no. 5, p. 67.

The material discovered from the above-mentioned sites—large baked brick structures in a well planned manner, the system of roads and streets, provisions for sewerage, the evidence of money economy, existence of a variety of crafts and industries, the proximity of the excavated sites to water or land routes—strongly suggest them to represent the sites of ancient towns or cities or even semi-urban centres in the Kuṣāṇa period. The nature of these urban centres varied often sitewise. Some of these were administrative centres while majority of them flourished as commercial and religious towns. Thus important towns whose existence is attested archaeologically as well as literally during the Kuṣāṇa period were, Puṣkalāvatī. Puruṣapura, Taxila, Huṣkapura, Juṣkpura Kaniṣkapura, Sanghal, Ropar, Kurukṣhetra, Indraprastha, Noh, Bairat, Hastināpura, Atrañjīkhera, Mathurā, Śrāvastī, Ahicchatra, Bhīta, Kauśāmbi, Kapilavastu, Sāket, Banaras, Sārnāth, Kuśīnagar, Chirand, Vaiśālī, Pāṭaliputra, Champā and Śiśupālgarh. A comparison of the Kuṣāṇa layers at these sites with the NBPW layers indicates the limitations of structural activity and rarity of material relics in the NBPW phase needed by different social classes in a town or city. This would lend additio nal support to the fact that there was a revival of towns in the Kuṣāṇa period due to economic prosperity and political stability in India. However, most of the sites were not exclusively Kuṣāṇa in character. Most of them came to be inhabited much earlier and continued to remain under occupation even after the Kuṣāṇas. But all of them have revealed flourishing Kuṣāṇa layers.

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[303] *AI*, no. 5, p. 67.
[304] *Ibid.*, p. 97.
[305] *Ibid.*, pp. 95-97.
[306] *Ibid.*, p. 86.
[307] *Ibid.*, p. 101.

CHAPTER THREE

TOWN-PLANNING AND STRUCTURES IN THE KUṢĀṆA PERIOD

THE ALMOST complete absence of any literary work on the subject makes it difficult to envisage the basic principles which might have influenced the town-planners during the Kuṣāṇa period. Some literary references to towns are no doubt available ranging between the 4th century B.C. and the 5th-6th centuries A.D., but they lack in information about many basic aspects of planning, and are marked by religious fervour and exaggeration. The uncertainty about the dates of compilation of the literary texts also makes it difficult to utilise them as source material for the Kuṣāṇa period. Even archaeology does not help us much in this connection on account of vertical diggings made in India. Apart from exposing remains of a large number of burnt-brick structures and monastic establishments, it does not present a coherent picture of planning and structures under the Kuṣāṇas.

However, some idea about town-planning can be formed by combining together literary and archaeological sources. We may also look to such sites as were situated in Afghanistan and Central Asia where excavations have brought to light structural remains of the Kuṣāṇv period. It appears that defence of cities, comfort of residents and the beautification of settlements were the main guiding principles of the planners. It may also be suggested that these principles hardly changed considerably throughout ancient India. Of course, slight changes were introduced during different periods of Indian history, but they were done with a view to strengthen the defence of the city and on account of changed concept of art or the availability of building material. The regional variation in the planning was also due to local conditions and traditions.

I. General Principles of Town-Planning in Early Indian Literature

Certain basic aspects of town-planning can be discerned on the basis of literary texts. The top priority was given to the proper selection of the site, suitable for a town or city. The geographical factor played an important part in the location of towns. It was considered essential that a town should have a good geographical situation. A town was to have invariably a strong natural frontier—water, forest, hill or desert, which could serve as the defence of the city. Both Kauṭilya and Manu[1] indicate the importance of forts situated near water, mountain, desert or forest. Of such forts Kauṭilya preferred a river or mountain fort. Manu also favoured a hill-fort. It appears that in hilly areas forts or towns were invariably situated in valleys, because they provided natural defence; but in plains towns were mostly situated on river banks or in its proximity as we find in northern India during this period. The advantages of rivers were that they might solve the problem of drinking water and irrigation to the hinterland, and act as channels of communication and thus facilitate trade. Towns could be established away from rivers also, but they were to be situated either on main land routes or on branch routes connecting a particular town with main trade route. Almost all the towns, surveyed earlier, commanded either of the two facilities or in some cases both.

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[1] R.P. Kangle, *The Kauṭilya Arthaśāstra*, Vol. II, Bombay, 1970 (2nd edition), III. 21. 1-2; G. Buhler (trans.), *The Laws of Manu*, S.B.E., XXV, VII. 69-70.

Besides, the site was also to have a very fertile agricultural hinterland, for the bulk of the grain on which these towns were fed, had to be ultimately imported from the countryside. Since the import of foodgrains from distant places might adversely affect the trade balance of the town, an agricultural hinterland was considered essential for the existence of towns. It was also desirable that a town should have in its proximity villages which might supply manual workers and fulfil the needs of urban population. Several references in the *Jātakas* suggest the existence of such villages in the close proximity of the city of Banaras. Thus, the *Alinacitta Jātaka* mentions the village of carpenters, near Banaras, who brought wood from forest and prepared beams and planks for houses.[2] Villages of smiths and potters are also noticed in the *Jātakas*.[3] The first consideration in laying out a town was thus the selection of a geographically suitable site. Manu explicitly suggests, "let him settle in a country which is open and has a dry climate, where grain is abundant, which is chiefly inhabited by Aryans, not subject to epidemic, disease or similar troubles and pleasant, where the vassals are obedient and his own people easily find their livelihood. Let him build there a town."[4] The same idea can be found in such works as the *Arthaśāstra*,[5] the *Miliñdapanho*,[6] the *Kāmasūtra*,[7] the *Mānasāra*[8] and the *Samārāṅganīya Bhawan Niveṣa*.[9] The fact that similar provisions for selecting a suitable site in literature belonging to different periods are made, suggests that this principle might have applied to the Kuṣāṇa towns as well.

The next step in the lay-out of the city was the proper measurent and demarcation of areas reserved for specific purpose like the palace, temples, residential houses of various *varṇas* and professions, alms-houses, guest houses, taverns, brothels, tanks, wells, ponds, streets, roads, lanes, shops and so on. The site selected for a town was levelled and then demarcated for various purposes. The *Miliñdapanho* preserves an account of how a city was to be built. At one place Nāgasena says to Menander: "The architect of a city, when he wants to build one, first clears the site of the town, and then proceeds to get rid of all the stumps and thorny brakes, and thus makes it level, and only then does he lay out the streets and squares and cross roads and market places, and so builds the city."[10] A good account of the measurement of land and the laying out of the famous city of Kapilavastu is preserved in the *Saundarānanda* of Aśvaghoṣa[11] also. Similar accounts can be found in the texts on the *Vāstuvidya*. Thus selection of a proper site and its thorough measurement before laying out structures were essential features of town-planning in ancient India, including the Kuṣāṇa period.

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[2] E.B. Cowell (trans. and ed.) *The Jātaka*, II. 232.
[3] *Ibid.*, II. 156; III. 387, 408.
[4] *Manu*, VII. 69-70.
[5] *Arthaśāstra*, III. 21. 1-2.
[6] T.W. Rhys Davids (trans.) *The Questions of King Milinda*, SBE, XXV-XXVI, 1890, Bk. I-2.
[7] Devadata Sastri (ed.) *The Kāmasūtraṁ* (in Hindi), Varanasi, 1964. IV. 3.
[8] P.K. Acharya, *Architecture of Mānasāra*, IV, OUP, 1933, IV. 2-3 to 38-39.
[9] D.N. Shukla, *Samarāṅganīya Bhawan Niveṣa* (in Hindi), Delhi, 1964, 27-35 and 52-57.

Before constructing structures within the city, steps were taken to protect it from aggressive elements. This was done with the help of fortification. The fortification or defence of cities was the most vital consideration because the prosperity of the city depended on it. A city could never flourish unless its security was ensured. To guard against invasions as well as attack from unsocial elements, a very common feature in ancient times, almost all the cities were provided with natural or artificial defence. The natural defence was provided by rivers, mountains, forests or deserts and the artificial one by constructing city walls, moats, ramparts and ditches. The defence of cities was considered so essential that even those towns which were situated in mountain valleys or on the banks of rivers took adequate steps for fortification. The fortification of cities is a common and oft repeated theme of the Indian literature. The literary works clearly suggest that cities were surrounded by walls and moats, and that gates with towers were provided to keep watch on undesirable elements and prevent their entry in the city. The walls were made either of mud, brick or stone. The system of artificial fortification was also common to the cities of ancient Greece and Rome.[12]

The literary works like the *Arthaśāstra* of Kauṭilya, the Pāli *Jātakas*, the *Miliñdapanho*. The law books of Manu, the *Mānasāra*, lay stress on the proper defence of city and suggest the construction of city wall, ramparts, gates and watch towers. As *durga* occupied an important place in the Kauṭilyan concept of state, Kauṭilya makes elaborate arrangement for its protection by surrounding it with a ring of three moats. Rampart, parapet with passage for the movement of chariots, turrets with steps and towers were also to be built on forts. Construction of removable bridges, *gopura* (gate) and channels for storage of goods and arms are also suggested. These stores were to be filled with different kinds of weapons. Other measures to obstruct the enemy's advance to a fort is also suggested by Kauṭilya.[13]

However, it is difficult to point out how far in actual practice Kauṭilya's account was taken into consideration. Although there seems to be much in

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10. *Miliñda*, II, 1, 9; V. 4.
11. E.H. Johnston (trans.) *The Saundarānanda or Nanda the Fair*, OUP, 1932, I. 31-57.
12. *IHQ*, XXX, p. 238.
13. *Arthaśāstra*, III. 21-35.

common between the descriptions of Megasthenes, Kauṭilya and other classical writers as regards the description of the capital city of Pāṭaliputra, there is no means to examine the details of town-planning as preserved in these texts. Nevertheless we cannot agree with the view that Kauṭilya's idea of a city-plan is "more in the nature of design in abstraction than a matter of social reality."[14] Kauṭilya must have before him the instance of other cities about which we hear right from the 6th century B.C. It is interesting to note in this connection that the stone fortification at Rājagṛiha, the ancient capital of Magadha, can still be seen. It was built by king Ajātaśatru (492-460 B.C.) against the impending danger of Āvanti's attack on the Magadhan capital. It may also be pointed out that several wooden pillars have been discovered round Kumrahar, which represents the ancient city site of Pāṭaliputra. These pillars perhaps formed part of the wooden palisade of the city about which Megasthenes informs us.

The *Jātakas* clearly suggest measures adopted for the fortification of ancient towns. Severel references in this text point to the existence of wall and moats surrounding the cities, the use of city-gates and watch towers, apparently for defending a city from enemy attack. Thus city walls and moats surrounding the city of Banaras are frequently referred to. We are told that walls encompassing this city were 12 *leagues* round while the city and suburbs taken together formed a perimeter of 300 *leagues*. The famous city of Vaiśālī is said to have been surrounded by a ring of three walls, each erected at a distance of one *league* from one another and were provided with gates and watch towers. These and similar other references in the *Jātakas* suggest that cities were generally fortified and were provided with moats, gates and watch towers. The walls were made either of mud, brick or stone. Although there seems to be an amount of exaggeration in *Jātaka* accounts, those bearing on the defence system appear to be quite realistic in nature. The excavations of many urban sites in north-western and northern India have revealed the traces of massive fortifications.

Other literary works also preserve the descriptions of fortified cities. From the *Mahāvastu* it appears that the royal city of Dīpāvatī head many gates, fitted with doors and bolts. The citadel of Kapilavastu was built square and made impregnable to attacks. The royal palace was surrounded by high walls and moats, the city had four gates, one in each direction, fitted with heavy doors.[16] The city of Sagala was noted for its brave defence, strong towers and ramparts, superb gates, archways and deep moats.[17] The same is true of the city of Campā.[18] That cities were surrounded by walls and moats and sometimes by earthen ramparts is clear from the *aṅgavijjā*, a Jaina text, belonging to the Kuṣāṇā period. The *Mānasāra*, like the *Arthaśāstra* and the *Manusmṛti*, suggests that "all the forts should be surrounded with a wall and a ditch; they should be furnished with (storage) gates at the places of entrance and exit. The (surrounding) rampart should be built of brick and such other material (i.e. stone) and should be 12 cubits (i.e. 18 feet) high, with gang-ways half-way from the bottom of the wall".[19] All these references emphasize the defence of cities. Excavations in the north-western as well as northern India of Kuṣāṇa urban centres have revealed the existence of such fortifications.

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[14] Amita Ray, *Villages, Towns and Secular Buildings in Ancient India* (c. 150 B.C.—c. A.D. 350), Calcutta, 1964, p. 41.

[16] J.J. Jones (trans.) *The Mahāvastu*, SBB, XVI-XVIII, I, pp. 153-54; II, pp. 34, 111; R.L. Mitra (trans. and ed.) *The Lalitavistara*, Calcutta, 1877, p. 260.

[17] *Miliñda*, pp. 2, 53, 208.

[18] J.C. Jain, *Life in Ancient India As Depicted in the Jain Canons*, Bombay, 1947, pp. 187-90.

II. Fortification

In the north-western India, Charsada (ancient Puskalāvati) situated nearly 20 miles north-east of Peśāwar in Pakistan, has revealed some traces of fortification. It was already encircled by a ditch and a wall in the 4th century B.C.[20] Saikhan Dheri mound gives some idea about the planning and structures of the Kuṣāṇa city, but the excavation of the site does not throw any light on the defence of the city. Possibly it might have been surrounded by a strong city wall with gates and towers to defend it from external attacks.

The best defence system of cities in this region is suggested by the excavations at Taxila, the ancient metropolis of Gāndhāra. In spite of the fact that this city commanded a natural defence, additional measures were taken to ensure its safety. Three distinct urban settlements prospered at Taxila—the Bhir Mound, Sirkap and Sirsukh. All the cities differed from each other as regards town-planning. The earliest was "haphazard" in plan, the second one was planned on "Greek-chess board pattern", while the last city betrays contemporary central Asian influence.[21]

As regards the defence system of the city no fortifications have been traced at Bhir Mound and hence it is difficult to suggest about the measures adopted for the protection of this city. Either it relied on natural defence or there existed some fortification of earth which is not traceable now. It is also possible that no attention was given to the fortification of the town because the city of Bhir Mound was not planned in a regular way.

Compared to the Bhir Mound, the second city at Sirkap, built by the Bactrian Greeks during the early years of the 2nd century B.C., has exposed a massive fortification. The fortification wall was made of earth as well as of stone. The earlier earthen wall has been assigned to the Greek builders and the later stone wall to the Śakas, probably Azes I, who ousted the Greeks and occupied the city.[22] No trace of the earthen wall existed at the time of the excavation of the site, but the remains of stone wall were exposed which surrounded the city of Sirkap. The entire wall was nearly 6,000 yards or 3½ miles in length. The thickness of this wall varied from 15 to 21 ft. 6 inches, and the height ran up to possibly, 20 and 30 feet. This massive wall clearly suggests the strong fortification at Sirkap. The core of the entire wall was made of random rubble in mud, while the facing revealed the construction of coursed rubble, as notified in other buildings at Sirkap, belonging to the Greek and Śaka period. On the eastern side, the city wall was buttressed on the outside by a beam of about 25 feet width and a number of rectangular bastions, built at irregular intervals along its face. The beam was made to protect the foundations of the wall from possible undermining. The bastions were probably three-storeyed high, hallow and loop-holed, for the use of the defenders of bastions. However, only the upper portions of bastions at Sirkap were loop-holed, but at the later city Sirsukh this system was provided in the lower as well as upper part of bastions.

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[19] *Mānasāra*, X. 106-09.

[20] Wheeler, *Charsada*, OUP, 1962, p. 13.

[21] J. Marshall, *Taxila*, I, pp. 3-4.

[22] *Idem.*, *A Guide to Taxila*, Delhi, 1936, p. 78.

The city walls at Sirkap were provided with many gates, their number being possibly four. The excavations, however, exposed the remains of only one city-gate, the northern gate-way. This gate was so designed that it could check any sudden attack and prevent the invaders from running over to the main street. Its position was such that the street was screened by this gate-way. Another advantage of this gate-way was that it protected the main street from the onrush of flood water to some extent, as it was under this gate-way that an underground drain passed. As only its foundations were exposed, it is not possible to trace the entire planning of the gate-way. Possibly it had a large hall, which constituted the gate-way proper, and four guard-rooms, two of which had provisions for sleeping rooms. The guard-rooms were provided with an upper storey so that the soldiers posted there might be in direct contact with the battlements. However, there is no evidence to suggest whether there were more upper storeys over the gate.[23] This fortification must have existed even in the post-Greek period.

Fortifications were noticed at Sirsukh also, a city built by the Kuṣāṇas. The ruins of this city were enclosed within a strong fortification. On the northern and eastern sides of the city the ruins of the ancient ramparts were visible when Marshall excavated them. Perhaps northern and western walls also existed when Cunningham visited them. He suggests that these walls were 4,500 and 3,300 feet long respectively.[24] It also appears from his accounts that the city was nearly square in plan,[25] but Marshall takes the shape of Sirsukh to be "slightly irregular rectangle".[26] The exposed walls revealed that they were made of rough rubble and were overlayed with lime stone masonry of heavy diaper type. The thickness of the walls was 18 feet and 6 inches. Its base was supported on the outer face with a heavy roll plinth. This step was taken obviously to consolidate the foundations and prevent undermining. The plinth was added after the construction of the wall had been completed.[27] This unusual feature is not noticed at Sirkap or any other contemporary Indian site. However, it is noticed in the 14th century walls of Tuglakabad, near Delhi.[28] Perhaps this method of strengthening fortification was copied from contemporary central Asian forts, the homeland of the Kuṣāṇas.

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[23] *Idem.*, *Taxila*, I, pp. 113-15.

[24] *ASIR—Cunningham*, II, p. 121.

[25] *ASI—AR Frontier Circle*, 1914-15, p. 2.

[26] Marshall, *op. cit.*, p. 217.

There were also provisions for semi-circular bastions at the intervals of about 90 feet. Entrance to the bastions could be made through narrow passages. There were provisions for loopholes in walls as well as bastions. The loopholes were sloping towards the outside and were closed on the outer side with triangular tops. This gave them a western appearance.[29] Other details regarding the defence system are lacking. There is no idea about the manner and position of the city-gates and watch-towers, which must have existed. The fortifications at Sirsukh were built by Wema Kadphises who may have adopted the idea of rectangular planning from central Asia.[30]

Such planning is noticed in the town of Toprakkala (Khorezm) also. The town site occupied a rectangular area of 500 × 300 metres, surrounded by strong and massive brick wall. The towers on the wall were rectangular in shape and were loopholed for the defence of the fortification.[31] Similarly at Dalverzin Tepe, the site of an ancient Kuṣāṇa town, city wall, towers and a moat were noticed.[32]

We may also suggest some analogies and differences between the Sirkap and Sirsukh fortifications. It appears that at both places the upper storeys were generally made hollow. The walls were loopholed and invariably provided with beams or galleries for stationing armed guards on the first floor. The upper floors had open terraces and battlements.[33] But the differences between the two fortifications were more prominent. The walls of Sirkap betray Greek and Śaka influence as they were built of coursed rubble masonry whereas the walls of Sirsukh were made of heavy diaper masonry, a characteristic of the Parthian and early Kuṣāṇa periods. Secondly, whereas only the upper portions of bastions at Sirkap were loopholed, at Sirsukh this system was applied in the case of both their lower and upper portions. It also appears that the bastions at Sirkap were rectangular in plan but those at Sirsukh were semi-circular.[34] But there is no evidence to suggest that these fortifications were influenced by Indian traditions.

In northern India also the excavations at many urban sites have exposed the existence of fortifications. Sanghol, in Ludhiana district has exposed the remains of a defence complex, belonging to the second half of the 1st century to the 5th century A.D. It consisted of a series of three moats, one of which was outside the rampart while the rest were within it. Possibly the earth obtained by digging the moats was utilized for building the rampart and the beam.[35] At Purānā Quilā, which represents the ancient city of Indraprastha, a fortification wall was noticed, but it belonged to the period of the Tomaras.[36] However, there is no evidence to suggest any kind of fortification belonging to the Kuṣāṇa period, though the site has revealed traces of many structures belonging to the Kuṣāṇa period. The city of Mathura was also surrounded by a city-wall. This wall was made of mud-bricks and was nearly 20 feet thick. It was more than 50 feet high and was backed by a substantial earthen rampart. This fortification wall has been assigned to the Kuṣāṇa period. Similar surrounding walls with traces of towers were noticed at Kaṭrā in the vicinity of Mathurā.[37]

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[27] Marshall, *op. cit.*, p. 218.

[28] Wheeler, *op. cit.*, p. 42.

[29] Marshall, *op. cit.*, p. 218.

[30] *Ibid.*

[31] A. Mongait, (translated by David Skirrsky), *Archaealogy in the USSR*, Moscow, 1959, pp. 268-69.

[32] *Kuṣāṇa Culture and History*, Historical and Literary Society of Afghanistan Academy, UNESCO, no. 2 (1971), pp. 78-9.

[33] Marshall, *op. cit.*, p. 218.

[34] *Ibid.*

Śrāvastī, was another urban centre where Kuṣāṇa remains have been discovered.[38] Hsuan-Tsang, the Chinese pilgrim who visited this place, observed that the royal precincts at Śrāvastī were surrounded by a wall which was 20 *li* in circuit.[39] But perhaps the pilgrim was mistaken by the ruinous condition of the city and gave the circumference of the city instead of the palace. This becomes clear from the accounts of Cunningham, who noticed the earthen rampart and ditch which once defended the city of Śrāvastī. The earthen rampart was strewn with the fragments of large-sized bricks. The entire circuit of the rampart was 17,300 feet or 3¼ miles which compares well with 20 *li* or 3⅓ miles of the wall surrounding the royal palace alone, as Hsuan-Tsang describes.[40] W. Hoey was also able to lay out some of the outlines of the fortifications at this ancient city. He discovered ramparts and walls surrounding the city, along with four well-defined city-gates, brick watch-towers, quarters for soldiers, a guard room or a monk's residence or an octroi post, which might have served all the purposes at various periods, and two arches.[41] During a later excavation Vogel succeeded in exposing

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35. *IAR*. 1970-71, p. 58.
36. *Ibid.*, p. 19.
37. S. Piggot, *Some Ancient Cities of India*, OUP, 1945, p. 45. Recent excavations at Mathura (Dhūlkoṭ) also confirm the existence of a mud-fortification. This fortification has been tentatively assumed to the Śaka-Kuṣāṇa period. The most interesting thing to note here is that the fortification with river Yamunā on the east had "an irregular crescentic shape with more pronounced southern horn or end". This planning of the fortification is in conformity with early Puranic references. See. *IAR*, 1973-74, pp. 31-32.
38. K.K. Sinha (*Excavations at Śrāvastī* BHU, 1959, p. 11) says that at Śrāvastī during Period II (*c.* 200 B.C. —125 B.C.) the occupation "came to a close towards the beginning of the Christian era and with that the city seems to have lost its metropolitan character". But the earlier excavations suggest that the town was in a flourishing condition at least in the time of Kaniṣka. Excavations carried out before those conducted by Sinha have brought to light Kuṣāṇa structural complexes at Śrāvastī.
39. S. Beal, *Buddhist Records of the Western World*, Bk. VI, pp. 1-2.
40. *ASIR—Cunningham*. I, p. 331.
41. *Journal of the Asiatic Society of Bengal*, LXI, pt. I, (1872), Extra Number, pp. 37-38.

the main entrance of the city-gate near the *imlī Darwāzā* and suggested that *Māheth* represented an akropolis—the fortified inner city and was very much similar to *Quilās* of Muhammadan period.[42] All this evidence thus suggests that the ancient city of Śrāvastī was well-fortified and made impregnable. As several structures of the Kuṣāṇa period were noticed during excavations, there is reason to believe that the fortification wall also existed during the Kuṣāṇa period.[43]

Traces of fortification have been noticed at Kauśāmbī also. The entire fortification measured 21,170 feet or approximately 4 miles. The height of the rampart varied between 30 and 40 feet. The fortress was in the shape of an irregular oblong. The entire rampart was characterized by a series of salients or bastions, the space in between filled with rammed mud. This method of constructing bastions was adopted, keeping in view the economy of labour and the considerations for strengthening the defensive and structural strength of the rampart. Gates were provided invariably between the centre of two salients. The traces of a deep moat, encircling the entire rampart, was also noticed at Kauśāmbī. Besides, at a distance of nearly a mile from the rampart the existence of some mounds suggest that they formed the outermost line of the defence system at Kauśāmbī.[44] Thus at Kauśāmbī double system of defence is noticed. Such an elaborate arrangement for defence is not noticed at any other contemporary site.

Moreover, the entire fortification at Kauśāmbī suggests a highly developed knowledge of principles of defence in ancient India. This becomes clear from the eastern gate of Kauśāmbī. It was so made between two salients that they curtained it, and a bund in front of the gate completely screened it from the outside view.[45] Thus the armed-guard posted at the gate could easily watch the movement of any unwanted person through this gate, but he could not be noticed by the invader. A similar gate was also noticed at Sirkap.[46] It seems that such gates were made intentionally to keep them out of sight of the invaders and guard fortified settlements effectively. The material and technique involved in this fortification underwent several changes in course of time.

The strong defence of Vaiśālī is often mentioned in the Buddhist works and excavations here have actually brought to light remains of fortifications – the defence wall – which surrounded this famous city. A strong brick rampart along with military barracks was noticed in the area known as Rājā-Viśāla-Kā-Garh at Vaiśālī. Some Kuṣāṇa coins along with spears, arrow-heads and other iron implements were

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42. *ASI—AR*, 1907-08, pp. 87-90, 111-13. The latest excavation at Śrāvastī also brought to light the signs of a mud rampart in a crescented form. A brick parapet was added to the mud rampart subsequently, but this belongs to earlier date, possibly of the Śuṅga times. See, *A.I.*, no. 9 (1953), p. 144; *IAR*, 1958-59, pp. 47-50.
43. Ahicchatra also had a brick fortification of the shape of a "rough isosceles triangle", with a perimeter of about $3\frac{1}{2}$ miles but details about it are lacking. See, *AI*, no. 1 (1946), p. 37.
44. *MASI*, No. 74, pp. 1-4.
45. *Ibid.*, p. 2.
46. Marshall, *op. cit.*, p. 115.

discovered from these barracks.[47] During a subsequent excavation in the Garh area, three phases of the defence were discerned. The first phase belonged to the Śuṅga period. The defence wall during this phase was nearly 20 feet wide and was built of burnt bricks. The second phase of defence, assigned to the 1st centuries B.C. and A.D., was marked by a massive earthen rampart and a moat. The rampart varied from 21 feet to 68 feet in width and ran up to 13 feet in height. The defence wall of the third phase, ascribed to the late Kuṣāṇa and early Gupta periods, was 9 feet wide and was constructed of bricks along with brick-built military barracks. These barracks were utilised by soldiers stationed there for the safety of the Garh.[48] The discovery of various types of weapons along with the Kuṣāṇa coins from this area is highly significant. At no other site in Bihar such barracks have been discovered. We may suggest, therefore, that Vaiśālī might have been a military headquarters under the Kuṣāṇas from where they controlled the whole of Bihar. The direct link between Mathura, the eastern capital of the Kuṣāṇas, and Vaiśālī also supports this conjecture.[49]

From the classical accounts it appears that the ancient city of Pāṭaliputra was surrounded by a wooden fortification and ditches, though no trace of Kuṣāṇa fortification has so far been noticed here. However, from the accounts of a Chinese officer (A.D. 222-280) whose source of information was the reports of travellers who had just returned from India, it appears that the city of Pāṭaliputra was still fortified and deep ditches surrounded the city.[50] This account unmistakably suggests that the old fortification referred to by Megasthenes still existed in the third century of the Christian era. But we do not get any idea about the building material of this fortification. It is difficult to suggest whether the old wooden fortification was replaced by bricks or stones. However, the extensive use of burnt-bricks in the buildings at Pāṭaliputra may indicate that the wooden fortification must have been strengthened by the use of bricks. Remains of fortifications were noticed at Champā also. The mound of Champā was surrounded by a deep moat and evidence of a rampart wall was found here. The rampart wall was about 14 metres above the surface. Initially it was made of rammed earth, but later on rivetted with burnt bricks. Remains of a watch tower, an arsenal and probably a gate way was also excavated here.[51] But this rampart belongs to an earlier period. Due to partial excavations, it is not possible to determine at present whether this fortification continued in the Kuṣāṇa and subsequent periods.

From the foregoing discussion it appears that generally cities were surrounded by walls, ramparts and ditches. City-gates and watch-towers were provided to check the infiltration of unwanted persons in the city. The building material, however, varied region-wise. In north-western India, where towns were situated in hilly valleys and stone was available in abundance, stone was used for building walls and ramparts. But in northern India generally earth and brick were used as building material. However, there was no fixed rule regarding the number and height of city walls and gates. They were made according to local traditions and suit the defence of the city. Greatest care was taken to safeguard the fortification of the city. It was evidently for this purpose that Kauṭilya suggests construction of various obstacles in the fort and storage of deadly weapons. Besides, armed-guards stationed at the watch-towers also kept a constant watch on enemies. The law books also emphasise the protection of the fortification. Manu explicitly commands the king to immediately banish such persons who destroy the wall of a town or fill up the ditch round a town, or break a town-gate.[52]

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[47] Krishna Deva and Vijayakant Mishra, *Vaiśālī Excavations*, 1950, Vaiśālī Sangha, 1961, p. 14.

[48] B.P. Sinha and S.R. Roy, *Vaiśālī Excavations* (1958-62), Patna, 1969, pp. 26-27.

[49] *PIHC*, 1974, p. 45.

[50] *ASIR—Cunningham*, XI, p. 153.

[51] B.P. Sinha, *Archaeology and Art of India*, Delhi, 1979, p. 91.

It is also evident that all the towns, mentioned in the previous chapter, were not fortified. It appears that only capital cities (e.g., Sirkap, Sirsukh, Mathura, Śrāvastī, Kauśāmbī, Vaiśālī, Pāṭaliputra) were fortified. There might have been other fortified cities also during the Kuṣāṇa period, but neither literary nor archaeological evidence gives any indication about it. At the same time it appears that there was a large number of open towns, which were not important as administrative centres and hence had no fortification. Such towns were guarded by armed guards only. The number of open towns was larger than those of the fortified towns under the Kuṣāṇas.

III. Secular Structures

When the fortification of the city had been completed the construction of structures within the city was taken up. These included residential and religious buildings, roads, streets, drainage system, tanks, gardens, orchards etc., which served the needs of the citizens as well as beautified the city. A good account of the internal town-planning is also preserved in the literary texts. According to Kauṭilya, within the fort there should be constructed three royal roads running west to east and other three running north to south. It was to be made eight *daṇḍas* wide. Besides, there were to be made pathways for men as well as chariots and other animals, gateways, suitable places for water, drains and underground passages. The royal palace was to be erected amidst the residential area, facing east or north. Specific localities of the town were to be reserved for the residences of the four *varṇas*, royal officers, artisans, guildsmen, foreign merchants, priests and offices, workshops, stables, rooms for wares and medicines, treasury, and tutelary deities of the city and the king. In the centre of the city was to be built the shrines and temples of various deities. At a distance of 100 *dhanuṣas* from the moat, outside the city, were to be constructed sanctuaries, holy places, groves, and water-works. Cremation grounds for both upper and lower *varṇas* were to be situated outside the city. On the outskirts of the cremation grounds were to reside heretics and *caṇḍālas*. Kauṭilya also advises the kings to fix boundaries for householders keeping in view their

[52] *Manu*, IX, 289.

requirements for workshops.[53] This step was necessary to check the encroachment on royal as well as other lands.

Kauṭilya also prescribes certain rules for the construction of buildings. All permanent houses were to be provided with *avāskara* (dung-hill), *bhrāma* (water course) and a *udapaṇam* (well). From each house a sloping water course, at the distance of 3 *padas* of 1½ *arataṇīs* from the neighbouring site, was to be so constructed that either water could pass through it continuously or fall into drain. At a distance of a *pada* or an *arataṇī* from the wall of the neighbouring house, apartments for bipeds and quadrupeds, fire-place, water-butt (*udāñjaram*), a corn mill (*rochanīm*) and a mortar (*kuṭṭinīm*), were to be made. Between two houses or portions of two houses, a space of 4 or 3 *padas* was to be left vacant. The roofs of adjoining houses might be either 4 *aṅgulas* apart from each other or might cover the roofs of adjoining houses. The *ānidvāram* or the front door was to measure a *kiṣku*. The upper storey was to be provided with a small but high window. The top of the house was to be covered with a broad mat, strong enough to face the blowing wind. Moreover, the roof was to be made strong so that it might not easily bend or break. The violation of these regulations was to be a penal offence.[54] Thus the *Arthaśāstra* lays down guide-lines on which internal planning of a town was to be taken up.

The Pāli *Jātakas* also shed light on the internal planning of towns. They refer to windows and courtyards,[55] horses' stalls,[56] elephants' stables,[57] bath-houses,[58] lotus tanks,[59] heating chambers,[60] dice chambers,[61] bathing tanks,[62] water tanks,[63] weighing houses,[64] sleeping rooms,[65] columns,[66] pillars[67] and the dome of a house.[68] It appears that houses were more than one storey high. One or two storeyed to seven storeyed houses are mentioned in the *Jātakas*.[69] But they do not enlighten us as regards the building material, though the use of wood in the form of beams, planks and roofing material is suggested by several storeys.[70]

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53. *Arthaśāstra*, IV. 22, 1-32.
54. *Ibid.*, Bk. III. ch. VIII.
55. *Jātaka*, I. 5, 9, 22.
56. *Ibid.*, 23.
57. *Ibid.*, 26.
58. *Ibid.*, 124.
59. *Ibid.*, II. 261.
60. *Ibid.*, III. 321.
61. *Ibid.*, 360.
62. *Ibid.*, 397.
63. *Ibid.*, 408.
64. *Ibid.*, VI. 544.
65. *Ibid.*
66. *Ibid.*, IV. 465.
67. *Ibid.*, I. 121.
68. *Ibid.*, III. 347.
69. *Ibid.*, I. 23, 40, 62; II. 156, 232; VI. 544.
70. *Ibid.*, II. 156; III. 418.

It appears that the upper storeys of the houses, ladders, etc., were made of wood. The walls might have been made of bricks, either sun-dried or burnt bricks. The walls of the houses were plastered and decorated in different ways.[71] The *Jātakas* also throw interesting light on certain types of structures, e.g., alms houses, royal rest-houses and even the place of execution.[72]

Unlike the *Arthaśāstra* which merely theorises on town-planning, the *Jātakas* describe some of the important cities of the period. In spite of an element of exaggeration in them, their account seem to be realistic, the best account of the city and town-planning is preserved in the *Mahānārada Kassapa Jātaka* which describes the city of Rājagriha in the following words : "See a marvellous city with grand walls, making the hair stand erect with wonder, pleasant with banners upraised.... See the hermitages divided regularly in blocks and the different houses and their yards, with streets and blind lanes between... behold the drinking shops and taverns, the slaughter houses and cook's shops and the harlots and wantons... the garland weavers, the washermen, the astrologers, the cloth marchants, the gold workers, the jewellers... drums and tabours, conchs, tambours and tambourines and all kinds of cymbals... and lutes, dance and song well executed, musical instruments and gongs... jumpers and wrestlers, jugglers and royal bards and barbers... crowds are gathered here of men and women.... See the seats tiers beyond tiers... See the wrestlers in the crowd striking their doubled arms....[73]

Similar details can be found in other literary texts like the *Mahāvastu*,[74] the *Lalitavistara*,[75] the *Miliñdapanho*,[76] the *Buddhacarita*,[77] and the *Saundarānanda*.[78] These works refer to roads and streets, pontoon bridges, pinnacles of mansions, plastered walls of the houses, female apartments, splendid places to be used in different seasons, heavy doors and ladders, upper storeys of the houses, balconies and windows, gardens, lotus ponds, rest houses and wells which adorned the famous cities of Dipavati, Sagala, and Kapilavastu. There is much similarity between the accounts of these works and that of the *Jātakas*. Moreover, the *Saddharma-Puṇḍarika* or the *Lotus of the True Law* refers to various monasteries and *stūpas* made of marble, timber, bricks, clay or mud.[79] Residential structures also are described in this Buddhist text.

The Jaina works like the *Acārāṅga Sūtra* and *Kalpasūtra* also contain valuable information regarding town-planning and structures. Thus travellers' houses, garden houses, house-holders' houses or *maths*, halting places for caravans, parks, temples, assembly halls, wells, pathways, the places where three or four roads meet, and stables for animals are noticed in the *Acārāṅga Sūtra*. The art of plastering is also mentioned in this text.[80] The *Kalpa-sūtra* describes houses internally ornamented with pictures and having painted ceilings and externally whitewashed. The gymnastic hall is also referred to.[81] The Jaina canons describe seven storeyed houses adorned with towers and pinnacles and supported by many columns. They also suggest the existence of theatre halls, and religious structures like *devakulas*, *thubas* and *ceiyas*.[82] Several architectural terms and structures are mentioned in the *Aṅgavijjā*, another Jaina work. The use of wood in buildings and whitewashed walls is noticed in this text.[83] Its appears from the details preserved in this text that houses were fairly large.

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[71] *Ibid.*, V. 536; VI. 538.

[72] *Ibid.*, I. 40, 51, 96; II. 193; III. 340, 415, 419; IV. 442, 453, 465, 468, 499; VI. 538, 540.

[73] *Ibid.*, VI. 544.

[74] *Mahāvastu*, I. 213; II. 32-34, 111; III 405.

[75] *Lalitavistara*, pp. 23, 33, 38-39, 75-77, 101, 226-27, 255-60.

[76] *Miliñda*, pp. 2, 53, 208, 212.

[77] E.H. Johnston (trans.), *The Buddhacarita or Acts of the Buddha* (Reprint), Delhi, 1972, I. 23.

[78] *Saundarānanda*, pp. 5-6.

[79] H. Kern (trans.) *The Saddharma-Puṇḍarika*, SBE, XXI, I. 38.

Details regarding structures can also be noticed in the *Manusmṛti*[84] and the *Kāmasūtra*.[85] From the *Mrichchakaṭika* of Śūdraka it seem that walls of houses were made of baked as well as unbaked bricks, common clay and wood.[86] The *Nāṭya Śāstra* of Bharat Muni refers to three types of play-houses, *vikṛsta* (oblong), *caturasra* (square) and *tryasra* (triangular). The sizes of the play-houses also varied considerably from each other. They are described as *jeṣtha* (large), *madhya* (middle-sized and *avara* (small). The walls of such houses were to be plastered and carefully whitewashed.[87] One to twelve storeyed houses are mentioned in the *Mānasāra* also.

From these and several other literary references it appears that greatest care was taken in laying out different structures within the city. Separate areas for the royal palace, residences of officials and merchants, men belonging to four *varṇas*, workshop of artisans, rest-houses, almonaries, theatres, public buildings, relegious structures were to be demarcated carefully. There was to be ample provision for drinking water, drainage system and ponds, tanks, gardens and orchards. The houses of royal men, officers and rich merchants used to be more than one storey high. The common dwellings must have been less stupendous and massive. Great attention was paid to the interior and exterior decoration of houses.

However, it is very difficult to examine how far the provisions of the literary works were actually carried out in practice. The archaeological evidence on many points fails to satisfy us. Very few town-sites have been fully unearthed. Even whatever structural remains have been exposed fail to give a coherent picture of town-planning and structures. The archaeology has brought to light only remains

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80. F. Max Muller (ed.) *Jaina Sūtras*, SBE, XXII, 92, 108, 184-85.
81. *Ibid.*, pp. 237-43.
82. J.C. Jain, *op. cit.*, pp. 54, 187-90.
83. Motichandra, "Introduction to Aṅgavijjā", pp. 38-43; V.S. Agrawala, "*Introduction to Aṅgavijjā*" p. 82.
84. *Manu*, IX. 264-88.
85. *Kāmasūtraṁ*, IV. 3, 8.
86. M R. Kale (trans.) *The Mṛichchakaṭika of Śūdraka* (3rd revised edition), Motilal Banarsidass, 1972, III. 13.
87. M.M. Ghosh (trans.) *Nāṭyaśāstra*, I, Calcutta, 1967, II. 7-11; 24-85.

of walls and rooms, floors, drains and in some cases roads and streets. Nevertheless these remains help us in forming an idea about the town-planning and structures of the Kuṣāṇa period.

Archaeological excavations have brought to light a number of Kuṣāṇa urban settlements in the north-western part of the Indian sub-continent as well as northern India proper. The structures noticed at these places are either residential complexes or religious establishments. We shall first discuss the residential structures.

The principal sites yielding Kuṣāṇa structures in the north-western India are Puṣkalāvatī and Taxila. Puṣkalāvatī was founded by the early Bactrian Greeks, most probably Menander, in the 2nd century B.C. This city flourished till the reign of Vāsudeva, the last great Kuṣāṇa king. This becomes clear from the coins of the Vāsudeva discovered on the top stratum of the site. The city was probably re-built by Wema Kadphises, but the habitation waned in the time of Kaniṣka. Finally, during or after the reign of Vāsudeva, the site came to be deserted and the population shifted to the Rajar mound. The stratigraphy of the site reveals that there was no break in the occupation of the city. Similarly, though the house plans varied considerably the general lay out of the city was not altered.[88]

The excavations of the site exposed the remains of three streets, running parallel to each other, and crossing at right angles, which suggests that the city had regularly planned system of streets. Here in the planning of streets the influence of the Bactrian Greeks can be discerned. The street system was not disturbed and remained the same throughout the occupation of the city. Another important aspect of the structures of the Kuṣāṇa period is the lavish use of building materials from the structures of earlier periods. The lack of building stones in the immediate neighbourhood of Saikhan Dheri, compelled the Kuṣāṇa settlers to dig out the foundations of earlier walls, take out stone and fill the gaps with mud-bricks. This method proved easier and cheaper. Therefore, structures of the Kuṣāṇa period had deep mud-brick foundations over which was laid rubble core and the main walls were made in diaper style.[89]

During the excavations of 1963-64 several structural remains of the Kuṣāṇa period were noticed. These included remains of walls, drains, refuse pits and cesspools, a rectangular bathing place and a square fire-place. The building materials included stone, mud bricks as well as burnt bricks, but brick constructions were noticed only during the last phase of the city life, i.e. the Kuṣāṇa period. Brick-paved floors were also exposed in one of the streets.[90]

The most interesting structure of the Kuṣāṇa period, exposed at Puṣkalāvatī, was the *House of Nāradakha*, a Buddhist *ācārya*. This house survived throughout the Kuṣāṇa period though it underwent many changes and got burnt more than once. It had a central open courtyard, flanked by rooms on three sides. The fourth side was closed by a dividing wall. The main entrance of the house opened in a

[88] *AP*, vol. II (1965-66), pp. 23, 31.
[89] *Ibid.*, p. 24.
[90] *Ibid.*, pp. 26-7.

street. The use of burnt bricks, wood, and lime plaster in the structure was attested during the excavations. Three stages are discernible in the use of this house. In the time of Wema Kadphises, the house served as the residence of Nārdakha. During this period the existence of a bathing place in the courtyard, connected with a stone-built drain which discharged in the street, was noticed. The period of Kaniṣka witnessed several additions in the house, notably a bath-room and store-room. The discovery of big storage jars, vase and a large basin in front of a stone-seat along with a number of wheat mill-stones, suggests that now the house was occupied by some householder. Finally the house was converted into a temple complex.[91]

In Taxila, the Kuṣāṇa structures were noticed at Sirkap and Sirsukh. Compared to the Bhir Mound, the city of Sirkap, which remained under the Kuṣāṇa occupation even after the founding of Sirsukh by Wema Kadphises,[92] was planned more systematically. The structures exposed here belonged mostly to the Parthian and early Kuṣāṇa periods. The structures of the Parthian period were made in the diaper masonry. Certain basic features of the structures at Sirkap may be pointed out. It appears that throughout the occupation of the city no appreciable alteration took place in the planning of streets. Although many variations were noticed in the interior planning, little change could be traced in the arrangement of the outer-walls of the houses. It may also be pointed out that the general plan of the houses consisted of open courtyard skirted by chambers on one or more sides. This planning continued until the latest occupation of the city under the Kuṣāṇa.[93]

The excavations at Sirkap brought to light remains of private houses as well as a royal palace. The private dwellings were mostly constructed in the rubble masonry, though of diaper masonry style are also visible. The interior and exterior parts of walls had generally a coating of mud or lime plaster. Sometimes they were coloured too. Timber was used in the construction of upper floors, roof-tops, verandahs, doors, other miscellaneous fittings and sometimes for panelling on walls. The roofs were made flat and covered with a thick mud-layer.[94] However, it is not possible to ascertain whether like the Bhir Mound[95] the common houses at Sirkap were also more than one storey high.

The principal residential structure exposed at Sirkap was the royal palace. The palace was centrally situated on the cross way of two chief streets. On the western side it had a frontage of 352 feet and from east to west a depth of about 410 feet. The older portions of the palace were built in rough rubble masonry, ascribable to the beginning of the 1st century A.D. Signs of later repairs and additions were visible, particularly in women's apartments. In some of the important constructions (e.g., rooms and courts of special importance) the use of *Kanjur* and columns in grey sandstone, were noticed. The evidence for the use of wooden beams in constructions is suggested by the sign of chases sunk in the face of walls, noticed in many chambers of the palace. The application of lime or mud plaster with the traces of colour-wash was also attested during the excavations.[96] Possibly there were four entrances to this palace.[97]

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[91] *AP*, Vol. II (1965-66, pp. 28-9.

[92] Marshall, *op. cit.*, p. 112. See also *ASI—AR*, 1912-13, p. 23. Elsewhere (*ASI—AR*, 1927-28, p. 60), the uppermost structures are ascribed to the early Kuṣāṇa period, before Kaniṣka. But A. Ghosh (*AI*, no. 4. p. 45) suggests the occupation of Sirkap till the time of Huviṣka, who was a successor of Kaniṣka.

[93] *Ibid.*, pp. 118-23.

[94] Marshall, *A Guide to Taxila*, pp. 85-6.

[95] *Idem.*, *Taxila* I, p. 92.

The notable constructions within the palace at Sirkap included the 'Court of Private Audience', the 'Court of the Guard', the 'Court and Hall of Public Audience', royal chambers used on specific state occasions, banquet hall, bathroom, lavatory, retiring room, offices, women's apartments and a private chapel. However, no *tahkhānas* could be noticed in any part of the palace though such cellars were found in many of the private dwellings at Sirkap, The palace in its design and constructions compares well with the Parthian palaces at Assur, Dura, Nipur, early Sassanian palaces of Kish and ancient Assyrian palaces of Mesopotamia.[98] Almost a similar palace was excavated at Toprak-kala in Khorezm, a Kuṣāṇa town site. Like the palace at Sirkap there were many halls, e.g. the 'Hall of Kings', the 'Hall of Victors', the 'Hall of Deer', the 'Hall of Dancing Masks', the 'Hall with Circles', the 'Hall of Brown-Skinned Guardsmen', 'Harem complex' etc.[99] It seems, therefore, that the palaces had similar planning.

Some structures were also excavated at Sirsukh, the third and the last city at Taxila. However, due to limited nature of excavations conducted here, the details about planning and structures are meagre as compared to earlier city sites. The excavations near the Piṅdorā mounds brought to light the remains of a large building consisting of two courts, one large and the other small, connected by a passage, and a number of chambers between the two. The foundations of the walls were designed in the old lime-stone rubble masonry, but the upper portions of the walls were made in the semi-ashlar masonry style, an innovation introduced in the 2nd century A.D. and may be ascribed to the Kuṣāṇas. Traces of a pillared verandah and a strong room were also noticed here.[100]

The excavations at Puṣkalāvatī and Taxila, thus shed interesting light on the planning and structures of the Kuṣāṇa period. Cities were planned in a systematic manner and the whole area of towns was interesected by a number of parallel lanes. The houses were situated facing the streets. There is no idea about the roads and pathways, but they must have existed and connected different parts of cities. The general plan of the houses consisted of open courtyards flanked by chambers on one or more sides. The walls were made of stone, mud bricks as well as burnt bricks.

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[96] Marshall, *A Guide to Taxila*, p. 171.
[97] *Ibid*, p. 81.
[98] *Idem, Taxila I*, pp. 172-76.
[99] *JBBRAS* (New Series), vol. XXX, pp. 1-24.
[100] Marshall, *Taxila I*, p. 219.

The walls were plastered with lime or mud and often coloured. Floors were rammed either with bricks or mud. The use of timber is well attested in the constructions at these places. The roofs of the houses were also possibly made of wood, were flat and covered with a thick mud coating. The strong foundation walls make us believe that they supported multi-storeyed buildings. Drains were provided to carry out rain and refuse water. However, no existence of wells has been found within any one of the cities. The citizens had, therefore, to depend for the supply of water on streams which flowed near Taxila.

Kuṣāṇa structures have also been noticed at a number of sites in Punjab, Haryana, U.P. and Bihar, but the details regarding planning are lacking on account of limted and vertical diggings. Nevertheless the remains of brick walls, brick-paved floors, drains, ring-wells give some idea about the planning and structures during the Kuṣāṇa period. It appears that constructions in this part of India were mainly in burnt bricks, stone being used sparingly as building material. Within the city, well laid out roads and streets were made and ample care was taken for the drainage system. Wells were dug to facilitate drinking water. Timber was used lavishly in the houses for the purposes of doors, beams, columns and perhaps in the constructions of upper storeys. In contrast to the north-western India, the roofs of houses were made sloping and had clay tiles on them.

The excavations at Rāja-Karṇa-Kā-Quilā at Kurūkṣetra brought to light remains of ordinary Kuṣāṇa residences, built of well-burnt bricks, measuring 14 to 14½ × 9 to 9½ × 2½ to 3 inches dimensions.[101] Later on seven structural phases, belonging to the early centuries of the Christian era were noticed here. In the upper levels of these constructions the use of baked-bricks was attested, whereas in the lower levels mud-bricks were used. In one of the rooms of these houses was discovered a rectangular mud-brick pier, which possibly supported a rafter.[102]

At the Purāṇā Quilā near Delhi, which represents the ancient city site of Indraprastha, several structural remains of the Kuṣāṇa period were exposed. Whereas earlier constructions showed the evidence of kiln burnt bricks and rubble structures,[103] those belonging to the Śaka-Kuṣāṇa period were characterized by the use of baked -bricks, though the use of mud-bricks was also attested. The structural remains consisted of two rooms with signs of doorway, a brick-paved floor inside a room,[104] and a flight of steps.[105] Generally the bricks of uniform size (37×22×5 cms) were used in the structures, though bricks of larger dimensions were also used. Burnt brick structures belonging to the Kuṣāṇa period were excavated at Sanghol,[106] Noh,[107] Hastināpura,[108] Atrañjikhera,[109] Sonpur[110] and other sites

[101] *ASI—AR*, 1922-23, p. 88.
[102] *IAR*, 1970-71, p. 31.
[103] *Ibid.* 1954-55, p. 14; 1969-70, p. 4.
[104] *Ibid.*, 1970-71, p. 19.
[105] *Ibid.*, 1970-71, p. 31.
[106] *Ibid.*, 1968-69, p. 25.
[107] *Ibid.*, 1965-66, p. 38; 1971-72, p. 42.
[108] *AI*, nos. 10-11, pp. 8-27.
[109] *IAR*, 1960-61, p. 85; 1962-63, p. 36; 1969-70, p. 43.
[110] B.P Sinha and B.S. Verma, *op. cit.*, p. 11.

also, but details regarding planning and structures are lacking at these sites. The excavations of other Kuṣāṇa urban sites, however, provide more information about planning and structures. In and around Mathura, the eastern capital of the Kuṣāṇas, excavations were made at a number of sites like Kaṭrā mound, Jail mound, Kañkālī ṭīlā, Chaubārā mound, Jamalpur, Māṭ and Sonkh. Nearly eight decades of excavations at these sites have brought to light many structural remains of the Kuṣāṇa period but they mostly belong to Jaina, Buddhist and Brahmanical establishments. Secular remains are almost non-existent at Mathura. However, Stuart Piggot suggests the existence of a record office belonging to the Kuṣāṇas at Mathura.[111] Of other secular structures, mention may be made of remains of seven houses, built around an open area at Sonkh. These houses were exposed in level 16 which represents the Kuṣāṇa phase,[112] but the details of these houses are not reported.

Kuṣāṇa structures are more promising at Kauśāmbī than at Mathura. The excavations here brought to light residential complexes, including a palace, roads, lanes, by-lanes, drains, tanks, etc., which throw ample light on the internal planning of this city during the Kuṣāṇa period. The most interesting structures exposed here is a massive stone fortress, covering an area of 320×150 metres. The fortress is barrel-shaped in plan. Four main stages are noticed in the architecture of this palace. The last stage of the palace represents the Kuṣāṇa phase (*c.* A.D. 100-200). The architecture during this period was of hybrid character, showing the indiscriminate use of bricks and stones.

Moreover, new architectural features, hitherto unnoticed in the Ganges valley are noticed for the first time during the Kuṣāṇa phase. These include the construction of Śikhara-like domes and semi-elliptical barrel-vaults and segmental and four-centred pointed arches, the use of thick mortar and heavy coatings of plaster for bonding and geometrical contour perfection.[113]

The palace at Kauśāmbī consisted of three blocks—eastern, western and central—connected by galleries. In these blocks sets of rooms with domical surmounting structures, semi-elliptical vaults, verandahs, passages connecting the rooms with verandahs, galleries, door jambs of stone, basements, four-centred pointed and segmental arches, were noticed. The segmental and elliptical arches in the palace complex at Kauśāmbī compare well with the arches in the structures at Toparak-Kala and Dzhanbas-Kala in Khorezm.[114]

Besides, the palace complex remains of residential houses built of bricks were also excavated at Kauśāmbī. Six such residential complexes were unearthed. Though marked by individual features, the general plan of the houses remained the same. The houses generally consisted of two apartments—inner and the outer—to be used by men and womenfolk respectively. The femal apartments were more spacious than those of the men. Occasionally outer apartments had verandahs in front of rooms.[115] All the six houses excavated had been constructed in earlier periods, but alterations and additions were made during sub-periods V-VI (A.D. 25-175), which represent the Kuṣāṇa phase at Kauśāmbī.[116] These houses had courtyards, passages, verandahs, bathrooms and a tank. Remains of walls, forming parts of rooms, brick-paved floors and drains were also noticed in these houses.[117]

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[111] S. Piggot, *op. cit.*, p. 46.
[112] *IAR*, 1969-70. p. 42.
[113] *CAKP*, II, pp. 327-35.
[114] *Ibid.*, pp. 332-37.

Certain basic features of the residential structures of the Kuṣāṇa period at Kauśāmbī may be pointed out. The bricks were joined with the help of mud. The use of lime was made in special constructions like the tanks. However, the houses were whitewashed with lime, evidence for the use of timber is suggested by a number of post-holes and socketes for door-jambs. The floors of the houses were generally tiled with bricks, but the use of brick columns was rare. The discovery of large number of tiles suggests that the roof-tops were covered with tiles. The tiles were provided with holes and grooved channels so as to fix them in wooden or bamboo frames. The excavations, however, do not suggest whether the houses were single or multistoreyed, though from the discovery of two stair cases, it appears that houses were possibly of more than one storey. The main doors of the houses give the impression of being fairly wide, varying from 3 feet 9 inches to 4 feet 9 inches. The out doors of the rooms were probably built of mono-leaves. In an exceptional case, however, for one door-jamb two holes, near each other, were found. Perhaps the doors were fitted in wooden frames. The houses were generally situated by the side of roads and lanes.[118]

The excavations also throw light on the planning of roads, lanes and drainage system. A central road passed through the city and it was connected with other thoroughfares. Almost every house had access to this road either directly or through some lanes and by-lanes. This road was originally built in phase I of the city but was remodelled during various phases of its occupation. It was rebuilt systematically by the Kuṣāṇas. During this period its width and depth were 15 feet and 1 foot respectively. Besides, a number of lanes and by-lanes were also discovered. One of the lanes were nearly 200 feet long and was connected with the mainroad. One of the by-lanes had even a pavement of concrete, composed of *kaṅkar* and *surkhi*. For drainage purpose ring-walls, soakage jars, terracotta drains as well as open drains built of brick were used. But from the Kuṣāṇa period onwards, ring-wells were replaced by brick-built drains. Generally the drains were open, but one specimen of covered drain was also noticed. Three septic tanks, which could be periodically cleared, were also discovered. The jars discovered in lanes might have been used for storing water to be used to extinguish fire.[119] It may be pointed out here that

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[115] *MASI*, 74, pp. 29-30.
[116] *Ibid.*, p. 21.
[117] *Ibid.*, pp. 30-45.
[118] *Ibid.*, pp. 29-30.
[119] *Ibid.*, pp. 24-35.

Kauṭilya also in his *Arthaśāstra* (BK. II. 146) suggests that 'vessels filled with water shall be kept in thousands in a row without confusion, not only in big streets and places where four roads meet, but also in front of the royal buildings (rājaparigraheshu)". See, R. Shama Sastry (tr.), *Kauṭila's Arthaśāstra*, Mysore, 1967 (eighth edition), p. 165.

Structural remains of the Kuṣāṇa period were also noticed at Rājghāṭ. These included eight blocks of brick-built buildings, separated by lanes and alleys.[120] During another excavations a well-paved brick platform and well were excavated, belonging to Period III (beginning of the Christian era to A.D. 300), which represents the most prosperous building period at the site.[121] Remains of three rooms of baked bricks, a brick built floor and drain were exposed at Mason. These belonged to Period III (A.D. 100-200). Remains of a common passage, partial remains of a house consisting of four rooms, floors set with bricks and a road were also discovered here, belonging to the Kuṣāṇa period.[122] A large residential complex belonging to periods III-IV (100 B.C.—A.D. 250), covering the Kuṣāṇa phase, was discovered at Chirand. In one of the blocks of this house two small inter-connected rooms, with a drain running through their floors into a square cistern outside the main building were noticed. These rooms might have served as bathrooms or privies.[123]

At Vaiśāiī the excavations within Rājā Viśāla Kā Garh brought to light structures belonging to Śuṅga, Kuṣāṇa and Gupta periods. The Kuṣāṇa period exposed extensive brick-buildings along with sprinklers and deep bowl type of pottery. Period III (*c.* A.D. 100-300) may be taken to represent the Kuṣāṇa layer. The structural remains at Vaiśālī include fragments of walls, brick concrete foundations, concrete floors, parts of rooms of various dimensions, military barracks, roads, streets etc.

The excavations at Vaiśālī revealed that the general planning of structures noticed in earlier periods, was not altered during Period III. However, in contrast to the structures of Period II (*c.* 300-150 B.C.), which showed the use of square bricks in the structures, those belonging to the succeeding phase were marked by the use of brick-bats. But in spite of being made of brick-bats, the structures during phase III were more thick and substantial and had broad foundations of rammed bricks, 5-6 inches thick.[124] During a subsequent excavation (1958-62), however, use of substantive bricks in the buildings of Period III (200 B.C.—A.D. 300)[125] were also discovered. The buildings of this phase were massive and hardly exhibited the use of broken or reused bricks. Thus a wall running to a length of 77 feet and a drain as long as 41 feet were traced.[126]

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[120] *ABIHI*, III (1940), p. xliii.
[121] *IAR*, 1964-65, p. 45. See also, ibid., 1957-58, p. 50; 1960-61, p. 37.
[122] *Ibid.*, 1964-65, p. 43; 1965-66, p. 52; 1967-68. p. 47; 1970-71, p. 76.
[123] *Ibid.*, 1964-65, p. 7.
[124] Krishna Deva and Vijayakant Mishra, *op. cit.*, p. 13.
[125] B. P. Sinha and S. R. Roy, *op. cit.*, pp. 7-8.
[126] *Ibid.*, p. 29.

Some substantial structures of the Kuṣāṇa period were excavated at Vaiśālī. The buildings numbered as *2, 2A, 2B, 2D, 2E, 2F and 2J*, all belonged to the Kuṣāṇa period. In these houses traces of rooms, corridors and drains were found. In all these buildings evidence of the use of broken as well as substantial bricks was noticed. In one of the buildings bricks of two sizes, 16×10½×3 inches and 15×10×½ inches were utilized.[127] However, the houses were devoid of windows. Even signs of doors were not detected, except in two cases. Excavations do not suggest the use of lime, though mortar was used as a building material. The excavations also do not throw any light on the roofing material, nor on the heights of the buildings.

Impressive Kuṣāṇa structures were discovered at Pataliputra also. The upper layers of Period II (*c.* 150 B.C.—A.D. 100) and lower and middle layers of Period III (A.D. 100-300) may be taken to represent the Kuṣāṇa layers at Pataliputra. From these layers were excavated large brick-built walls, some of them being as long as 79 and 104 feet. Such large walls suggest that they formed parts of fairly massive houses. The excavations also brought to light several concrete floors and a drain which measured 34 feet long and 8 inches deep. The drain was covered and arrangement for its regular cleaning was provided by putting a covering brick breadthwise. This drain was built of large and thick bricks; it emerged either from a bathroom or a kitchen and discharged itself in a huge pit. Excavations have also revealed traces of verandahs and brick columns, which possibly served as pedestals in which wooden pillars were inserted to support the roofs of verandahs or halls. The houses were probably single storeyed and were roofed with clay tiles.[128]

The excavated remains of Kuṣāṇa structures from many urban sites in north-western and northern India, thus, confirm more or less what the literary texts speak about town-planning and constructions. The planning in these two regions did not differ fundamentally from each other. Greatest stress was put on the defence of cities, either by natural or artificial fortifications. Inside cities, roads, streets, lanes and by-lanes were made for wheeled traffic and pedestrians. The houses had access to these thoroughfares. One-storeyed to multistoreyed houses were constructed. These were often whitewashed, coloured, and decorated in various fashions. The internal arrangement of the houses suggests that different apartments for the use of men and women folk were made. The houses were provided with sleeping chambers, kitchens and baths. Drains were made to carry out refuge and rain water.

However, some distinctive features of the two regions may be pointed out. Whereas in north-western India stone was used lavishly along with bricks, in northern India the scarcity of stone led to the extensive use of brick as building material. Bricks of various dimensions were used in the constructions of northern India. Thus the use of large-sized bricks seems to be a general feature of the Kuṣāṇa structures in northern India.[129] Another difference is seen in the use of roofing materials and the construction of roofs. Whereas in north-western India roofs were made flat and covered with clay, the use of tiles in northern India seems to be common. Again, whereas in the north-western India architecture bears Indian as well as foreign influence in northern India it was essentially Indian in character and the architectural traditions of earlier periods were continued. An exceptional site in northern India was Kauśāmbī where the central Asian influence is noticed in the construction of arches. The use of stone in buildings at Kauśāmbī is also rather unusual.

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[127] B.P. Sinha and R.R. Roy, *op. cit.*, pp. 29-31.

[128] A. S. Altekar andV. K. Mishra, *op. cit.*, pp. 45-58. Some structures of the Kuṣāṇa period were exposed at Champā also during recent excavations conducted by the Department of Ancient Indian History and Archaeology, Patna University. Remains of two rooms, measuring 1.50m×00.90m and 1.31×1.40m. respectively were discovered here. The floor of these rooms had brick soling. A brick well was also found in one of the rooms, the diameter of the well being 1.20 meter. See, B.P. Sinha, *op. cit.*, p. 103.

IV. Religious Structures

The liberal religious policy of the Kuṣāṇa monarchs led to the establishment of many Brahmanical, Jaina and Buddhist edifices throughout the Kuṣāṇa empire. The excavations have exposed a large number of such structures in India, Afghanistan and central Asia. The largest number of religious structures are Buddhist because Buddhism was very much flourishing during the Kuṣāṇa period.

The most important religious structure discovered at Sirkap was the Apsidal Temple of the Buddhists. This temple was situated in a fairly large rectangular courtyard. The courtyard was supported by a platform, access to which from the main street could be made by two flights of steps. There were two lines of chambers by the side of these steps which might have served the dwelling purpose of the monks, residing in this temple, or as shops. The temple was built on a raised plinth in the middle of the courtyard and comprised a rectangular nave with a porch in front and a circular apse in rear. All these structures were surrounded by a *pradakṣina* path. In the middle of the apse, possibly there was a *stūpa*. Foundations of two square *stūpas*, built of heavy limestone blocks, were also discovered in the courtyard of the temple.[130]

Besides, a large number of Buddhist *stūpas* and monasteries were excavated round about Taxila, e.g., the Dharmarajika *stūpa*, the Kunala *stūpa*, the *stūpas* and monasteries at Mohrā Morādu, Pippala, Jaulian, Bādalpur, Lālchak, Jañdial and Bhāmalā. Most of these sites revealed Kuṣāṇa structures. The Dharmarājika *stūpa* was originally built by the Mauryan emperor Aśoka, but it was subsequently improved upon. During the Kuṣāṇa period the terrace and flight of steps were reconstructed in the semi-ashlar masonry. The glass tiling noticed in one of the floors of the *stūpa* also probably belonged to the Kuṣāṇa period. An apsidal *stūpa* temple, similar to that of Sirkap was also noticed here; but whereas the apse at Sirkap was circular, it was octagonal at the Dharmarajika. A complex of chambers, measuring 111 feet 4 inches × 67 feet 4 inches was noticed, situated opposite the entrance to the temple. In one of these chambers was discovered was silver scroll inscription of Kaniṣka dated in the year 136. This inscription along with a total number of 1485 Kuṣāṇa coins discovered from the Dharmarajika which ranges in date from the time of Kadphises I to Vasudeva and even the Kidara Kuṣāṇas strongly suggest the occupation of this *stūpa* throughout the Kuṣāṇa period.[131]

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[129] *Journal of the Gaṅgānāth Jhā Kendrīya Sanskrit Vidyāpeeth* XXVII, pts. 3-4 (1971), pp. 236-7. The bricks discovered from a number of Kuṣāṇa sites reveral a close uniformity in the use of bricks. Thus bricks measurjng 18×12×2, 18 to 17.5 ×12×2.5, 19×11×2 and 18×12×2.5 inchet were used at Ahicchatra, Kauśāmbī, Rājghāṭ and Kumrahär respectively.

[130] Marshali, *op. cit*., pp. 150-54.

Other noteworthy religious structures at Taxila were the four *Saṁghārāmas*, situated a little to the south-east of the Dharamarajika. Although the excavations carried out at these sites were limited, they are of interest to us because they belonged to the Kuṣāṇa period (A.D. 40-150). They were constructed in the diaper type of masonry and demonstrate the evolution of the quadrangular monastery during the early Kuṣāṇa period. The *Saṁghārāmas*, also furnish specimens of several other types of masonry, not noticed at other sites.[132]

Religious edifices belonging to the Kuṣāṇa period were also noticed at Kalawān, Girī, Pippala and Jaulian. Of these the most interesting ones were those belonging to Girī. Here the use of Corinthian pilasters was noticed and structures included a *stūpa*, courts, drain, small windows, passage way with flight of steps and a refectory or a common room.[133]

Of the religious structures of particular importance mention may be made of Kaniṣka's *stūpa* and *vihāra* at Peshawar and the Manikayālā tope built during the reign of Huviṣka. Traditions ascribe the construction of the famous Buddhist *stūpa* at Peshawar to Kaniṣka which has been confirmed by the discovery of a relic casket from this *stūpa* recording the gift of Kaniṣka. The excavations carried out by Spooner (1908-09) and Hargreaves (1910-11), at Shāh-jī-kī-Dherī have confirmed the identification of the site with Kaniṣka's *stūpa*, the details of which are also preserved in literary sources.[134]

The Shāh-jī-kī-Dherī was marked by two mounds, the smaller one representing the *stūpa*, the larger one the monastery. The *stūpa* had a cruciform ground plan and comprised a quadrangle with projections from middle of each of the four sides. The excavations brought to light along with the *stūpa*, the remains of the chapel, a bastion-like structure, a path and the traces of a dome. The chief architectural feature of the *stūpa* noticed here was a number of cross-walls radiating from the centre of the *stūpa* like spokes on a hub.[135] These two features, the cruciform ground plan and the radial walls of the *stūpa* drum and dome have analogies to some monuments in central Asia and the *stūpas* of Andhra.[136]

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[131] Marshall, *op. cit.*, pp. 237-93.

[132] *Ibid.*, p. 315.

[133] *Ibid.*, pp. 345-47.

[134] Interesting accounts of the construction and appearances of this *stūpa* is preserved in the literary accounts of Chinese travellers, Saka Khotanese legend, a Sogdian text, some mediaeval German literature and al-Biruni's descriptions of India. Thus Fa-Hien (James Legge, *The Travels of Fa-Hien*, Delhi, 1971, pp. 33-4) suggests that during the course of his travels in Gāndhāra Buddha had prophesied about the construction of this tope by Kaniṣka. According to the Chinese traveller, Kaniṣka built a tope and a monastery at the place where Buddha's famous alms bowl brought from Magadha was kept. The tope was the finest in the *Jambudvipa*, more than 400 cubits high and decorated with precious substances. Cunningham (*ASIR Cunningham*, II, p. 89) thinks that this monastery existed till the time of Akbar under the name of *Gor-Kaṭārī* or *Baniyā's House*. For details regarding different traditions and descriptions of this monastery and *stūpa* see, K. W. Dobbins, *The Stūpa and Vihāra of Kaniṣka I*, Asiatic Society, Calcutta, 1971 and Baldev Kumar, *The Early Kuṣāṇas*, Sterling Publishers, 1973, pp. 88-100.

The monastery at Shāh-jī-kī-Dherī revealed three levels of constructions. To the lowest level belonged two lines of pillars which formed part of a verandah with provisions for cells. Possibly the cells were built of timber. In the second level were noticed the remains of a long brick wall in the shape of a foundation or retaining wall of a platform. In the top stratum two semi-circular walls and a connecting wall were discovered. Projections towards the main *stūpa* noticed in this level possibly indicate the entrance to the monastery.

Manikayālā, 16 miles south-east of Rāwalpindī, was another Kuṣāṇa settlement where some monasteries seem to have existed.[137] Excavations at the site brought to light the remains of a *vihāra* with an attached *stūpa*, which belonged probably to the time of Kaniṣka. The planning of this *vihāra* and *stūpa* was similar to other religious structures noticed in the Gāndhāra region.[138] More or less on similar planning were constructed the Surkh Kotal temple in Bactria,[139] the *stūpa* at Koh-i-Mori in Kham-i-Zargar in Kapise,[140] the temple at Hadda[141] and similar religious structures at other sites. The religious edifices of Kashmir resembled the contemporary Buddhist structures of Gāndhāra in planning and elevation. Buddhist *stūpas* belonging to the Kuṣāṇa period were noticed at Uskar and Harwan. However, some difference between the building style of these monasteries is noticed. The *stūpa* at Uskar was built in the chip-masonry style but that of Harwan was constructed in the diaper-pebble as well as diaper-rubble masonry.[142]

Religious structures of the Kuṣāṇa period have been unearthed at Mathura, Śrāvastī, Kauśāmbī, Piprahwā, Rājghāṭ, Sārnāth, Chirand, Vaiśālī and Pāṭaliputra. These include Buddhist *stūpas*, *vihāras*, temples, *devakulas* and shrines for the *nāga* worship. But the Buddhist structures in northern India are not as stupendous as those discovered in the Gandhara region. This was perhaps due to the fact that during this period Buddhism was in a more flourishing condition in the north-western India under the liberal patronage of the Kuṣāṇa kings, especially Kaniṣka.

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[135] K. W. Dobbins, *op. cit.*, pp. 17-18.

[136] *Ibid.*, p. 41.

[137] Cunningham suggests (*ASIR Cunningham*, II, pp. 157-60) that Manikayala was the site of a small town, containing nearly 1500 or 2000 houses. An old tope built by king Huska or Huviṣka existed here. The coins of this king and those of Kaniṣka were found at Manikayala.

[138] *ASIR Cunningham*, XIV, pp. 1-6.

[139] *ABIA*, XVI, pp. LXXXIX-CXI.

[140] *AHCO*, XX, no. 4 (1968). pp. 67-8.

[141] *Kuṣāṇa Culture and History*, no.2 (1971), pp. 44-7.

[142] R. C. Kak, *Ancient Monuments of Kashmir*, London, 1933, pp. 50-51.

Mathura was the most important religious centre in northern India where Buddhist, Jaina and Hindu faiths prospered simultaneously. Here devotees of different creeds congregated and made a large number of endowments to churches. Several Kuṣāṇa inscriptions discovered in the vicinity of Mathura, record the dedication of tanks, gardens, wells, *yūpas*, Jaina and Buddhist images, railings, pillars to religious establishments.[143] They also suggest the existence of many vihāras at Mathura, e.g., the Buddharakṣita Vihāra, Chutaka Vihāra, Śrīvihāra, Suvarṇakāra Vihāra, Dharmahastika Vihāra, Kāsṭīkiya Vihāra and the Vihāra situated at Anyor. Other religious establishments noticed in the inscriptions are the Madhurā Vanaka *Stūpa*, the *nāga* shrine of Dadhikarṇa, and the *devālayas* of Kaniṣka and Huviṣka.[144]

However, religious structures at Mathura were so devastatingly destroyed by the iconoclasts and vandals that it becomes difficult to reconstruct the architectural details of these edifices. Nevertheless, the archaeologists have succeeded in locating at least the sites of some of these monasteries. Thus, Cunningham identified the sites of the Upagupta monastery, the monastery of Huviṣka and the Kuṅda-Sukha Vihāra at Kaṭrā and the Jail mounds respectively.[145] The excavations at Kankali Tila, Jamalpur, Chaubara mounds and other places have brought to light a large number of pillars and rails, brick-walls and pavements, the figure of a naked dancing girl and three statues of lions, which once adorned gateways of the Huviṣka Vihāra,[146] a large bell capital of pillar adorned with an elephant and bearing the name of Huviṣka, some large pillars of a Buddhist railing, the faces of which were decorated with naked female figurines and scenes depicting domestic, religious and love scenes, architraves or coping stones, similar to those discovered at Sāñchī, Kauśāmbī, Gaya and other places[147] and nearly 50 bases of similar size and style belonging to Huviṣka's Vihāra.[148] These architectural remains indicate that the structure to which they belonged must have been massive and decorated in the usual fashion of Buddhist *stūpas* and *vihāras* noticed elsewhere in India. However, there is no evidence to suggest any foreign influence on the Mathurā architecture. It seems that early Indian architectural traditions continued to influence the religious architecture of the Kuṣāṇa period at Mathurā.

[143] For example an inscription engraved on a colossal seated figure of a Kuṣāṇa king, discovered from Ṭokrī Ṭīlā near Māṭ in Mathura, records the construction of a *devakula*, *puṣkariṇī*, garden, well, assembly hall and a gateway. See K. L. Janert (ed.) *Mathurā Inscriptions* Gottingen, 1961, p. 135.

[144] *Ibid.*, p. 31 ff.

[145] *ASIR*, *Cunningham*, I, pp. 232-41. Vogel (*ASIR-AR*, 1901-09, p. 160), however, takes the Jamālpur site to represent the site of the Buddhist monastery founded by Huviṣka.

[146] *Ibid.*

[147] *Ibid.*, III, pp. 19-25.

[148] *Ibid.*, XVII, p. 108.

Subsequent excavations have indicated that several religious structures like a Jaina *stūpa*, two Jaina temples, a Buddhist *vihāra*, and a Vaiṣṇava temple once existed at the Kaṅkālī mound at Mathurā.[149] Thus Jamalpur mound, apart from the Buddhist monastery built by Huviṣka, also housed a *nāga* shrine.[150] Māṭ was the place where a *devakula* of the Kuṣāṇa period was built.[151] The apsidal brahmanical temple, excavated at Sonkh proved to be a shrine of the *nāga* worshippers.[152] Thus remains of several religious structures of the Kuṣāṇa period have been exposed at Mathurā, but unfortunately details about them are lacking.

Brick remains of the *stūpas*, ascribable to the Kuṣāṇa period were noticed at the *Kacchī* and *Pakkī Kuṭīs* and the *Jetavana* area of Śrāvastī. One of the *stūpas*, noticed at the *Pakkī Kuṭī*, compares well with the Jaina *stūpa* noticed at the Kaṅkālī Ṭīlā of Mathurā.[153] The use of drum was noticed in one of the *stūpas* at the *Jetavana*, while from the other one was discovered an inscription in the Kuṣāṇa characters.[154] Besides, remains of some monasteries were also noticed at Śrāvastī. These were square as well as oblong in plan and were provided with open courtyards, verandahs, cells and flights of steps.[155]

The inscription of the nun Buddhamitra, belonging to the reign of Kaniṣka and discovered from the area of the *Ghoṣitarāma* monastery at Kauśāmbī,[156] suggests that this monastery was in a flourishing condition in the Kuṣāṇa period and that the devotees to the faith made endowments to the *Vihāra*. The *Vihāra* contained a massive square *stūpa*, chapels for monks, several smaller *stūpas* and a small shrine of *Harītī*. The entire monastery was surrounded by a boundary wall, the length of the walls measured nearly 181 feet, and the width varied from 13 feet 6 inches to 9 feet 6 inches.[157]

The monastic establishment exposed at Piprahwā (Kapilavastu) consisted of 17 rooms, constructed of baked bricks. The use of lime mortar in the structures was noticed. The last but one phase of this monastery has been assigned to *c.* A.D. 200-300.[158]

The remains of a temple were excavated at Rājghāṭ near Banaras. The remains of a circumambulatory path, apartments facing the *maṇḍapa*, which was supported by 12 pillars, the sanctum of the temple and a large cess pit were discovered.

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[149] *ASI*, *NIS*, XX, pp. 1-4.
[150] *ASI—AR*, 1908-09, p. 160.
[151] *Ibid.*, 1911-12, pp. 120-21.
[152] *JAR*, 1969-70, p. 42; 1971-72, p. 48.
[153] *ASI—AR*, 1907-08, pp. 91-5, 109.
[154] *Ibid.*, 1910-11, pp. 14-16.
[155] *Ibid.*, pp. 7-11.
[156] *JAR*, 1953-54, p. 9.
[157] *Ibid.*, 1954-55, p. 16. The construction of this monastery has been assigned to Bhadramagha or his successors towards the end of the 2nd century A.D. But the discovery of an inscription belonging to the reign of Kaniṣka does not agree with the dating of the construction of the monastery.
[158] *PIHC*, 1972, p. 98.

Besides, a hall with provisions for five wells, a rectangular tank, a house with a paved court also formed part of this temple. The discovery of a large number of fragments of *kalaśas,* with relief designs of lotus, rosettes, leaves, flying geese in concentric bands, clay sealings representing *Nike*, *Apollo*, *Pallas* and *Herakles*,[159] from this house, strongly suggests it to be a temple site.

Sārnāth, in the vicinity of Banaras, was one of the most celebrated places in the history of Buddhism. It was here that the Buddha made his first sermon at the 'Deer Park'. The place, therefore attracted kings, nobles, merchants and other devotees who built here *stūpas* and *vihāras* in honour of the founder of Buddhism and made large and generous donations to the monastic establishments at Sārnāth, which enabled it to flourish as one of the most important religious towns of northern India in the early centuries of the Christian era.

Remains of numerous religious structures have been unearthed at Sārnāth. The most imposing of all such edifices was the *Dhamekh Stūpa* originally constructed by the Mauryan emperor Aśoka, but subsequently improved and strengthened under the Kuṣāṇas and even later on. It is a massive round tower nearly 93 feet in diameter at the base, and rising to a height of 110 feet. Stone and bricks are used in its construction, the lower part, up to a height of 43 feet, being made entirely of Chunar stones, the upper portions show the remains of brick constructions.[160] This brick construction may be assigned to the Kuṣāṇa period. Possibly, the entire brick construction was plastered. In the lower portions of the *stūpa*, eight projecting faces, with niches and pedestals for statues, were discovered. These niches were ornamentally decorated and had statues of the Buddha, remains of some of which can still be seen. Apart from this *stūpa*, some monasteries belonging to the Kuṣāṇa period were also excavated here.[161] Some monasteries of the Kuṣāṇa period were noticed at Kasia[162] and Chirand[163] also.

The *stūpā* which the Lichchavīs built at Vaiśālī over the relics of the Buddha after his *parinirvāṇa*, in the 5th century B.C., was renovated and enlarged for the last time in the 1st century A.D.[164] During this period the *stūpa* was strengthened in order to protect it from the danger of inundation.[165] The Buddhist monastery exposed at Sonpur, belonging to the Kuṣāṇa period, had two small square cells and a verandah.[166]

Monasteries of the Kuṣāṇa period were discovered during the course of excavations at Pāṭaliputra. Two types of monasteries were noticed here. The usual pattern of the *vihāra* at Pāṭaliputra consisted of a central courtyard and rooms on

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159. *ABIHI*, II (1940), pp. XLIII-XLIV.
160. *ASIR*, *Cunningham*, I, pp. 107-09.
161. *ASI—AR*, 1919-20 p. 26; 1928-29, pp. 96-7.
162. *Ibid.*, 1905-06, pp. 61-74; *AR*, *ASI-CC*. 1905, p. 40; 1907, p. 19.
163. *JAR*, 1962-63, p. 6.
164. B. P. Sinha and S. R. Roy, *op. cit.*, p. 5.
165. *Ibid.*, pp. 18-19.
166. B. P. Sinha and B. S. Verma, *op. cit.*, p. 15.

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three sides with verandahs. The unusual style of monastery here comprised 14 small cells and four narrow but longish halls in their front. The remains of an open verandah was traced in the front of these halls. The flights of steps were provided at six places to approach the verandah. The monastery was laid on a brick concrete foundation. The use of lime plaster was noticed at several places. From the dimensions of the walls, cells and halls it appears that the present *vihāra* was a massive structure. Such monasteries have not been reported from any other site. Apart from the remains of the monastic establishments, a brick *chaitya* with a *stūpa*, ascribed to the 1st three centuries of the Christian era was also discovered here. Like the rare monastery the brick *chaitya* is also unusual.[167]

It has also been suggested that the Kuṣāṇas remodelled the simple hypaethral shrine erected by Aśoka and laid the foundations of the present Mahābodhī temple at Both Gaya. An inscription of the 2nd century A.D. in Kharoṣṭhī discovered from here also suggests the foundation of this religious skyscraper in the Kuṣāṇa period. The method of vaulting noticed here reveals the Sassanian influence, introduced by the Kuṣāṇas in the temple of Bodh Gaya.[168]

The religious structures of the Kuṣāṇa period suggest the predominance of Buddhism during the period. This is quite in conformity with the Buddhist texts which eulogise the splendours of the sect. The catholicity of the Kuṣāṇas was largely responsible for the growth in the number of Buddhist structures under the Kuṣāṇas. However, the religious edifices, unlike secular structures, reveal very few traces of foreign architectural design. The Indian architectural tradition of the earlier period noticed at Sāñchī and Bharhūt was improved upon and made more massive and ornamental under the Kuṣāṇas.

V. Observations

On the whole, archaeological excavations of the Kuṣāṇa sites, though deficient in many ways,[169] indicate a remarkable similarity of architectural details preserved in the literary works. It is also apparent that the period of the Kuṣāṇas witnessed a great building activity both in secular and religious spheres. The use of bricks, timbers, limes, plasters, tiles in the buildings, provisions for different apartments, halls, kitchens, baths, sewerages, wells, etc., suggest the high standard and sophisticated taste of the citizens in the construction of buildings. This is also an indication of their economic prosperity. Although we have no means to examine whether the structural remains indicate the houses of the gentry or the elite, it is likely that the general planning and use of building material must have remained the same in both the cases. But the houses of the aristocracy must have been more massive and ornamental than those of the common citizens.

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[167] A. S. Altekar and V. K. Mishra, *op. cit.*, pp. 40-58.

[168] Benjamin Rowland, *The Art And Architecture of India*, Penguin Books, 1970, pp. 162-63.

[169] One of the major difficulties in this connection is that in the reports of the excavations, Kuṣāṇa levels have no separate identity. They are included in a wider range of period and hence it becomes difficult to pinpoint sometimes the basic features of Kuṣāṇa structures.

CHAPTER FOUR

URBAN OCCUPATIONS AND CRAFTS IN THE KUṢĀṆA PERIOD

The contemporary scriptural and epigraphic evidence gives an idea of the urban occupations and crafts during the Kuṣāṇa period in India. The crafts and the persons associated with them seem to be of two types, those engaged in productive activities, like carpenters, smiths, potters and weavers, and others like washermen, barbers, garlandmakers, and so on. Majority of them depended on towns for their existence. The Buddhist and Jaina literature, the dramatic works of Aśvaghoṣa and similar other works are replete with reference to urban occupations and crafts during the period.

The *Jātakas* refer to professions of garlandweavers, washermen, astrologers, cloth merchants, goldsmiths, jewellers, carpenters, painters, potters, tailors, weavers, blacksmiths, barbers, courtesans and others.[1] The list supplied by the *Jātakas* includes both the productive and non-productive occupations and crafts.

The *Miliñdapanho*, a Buddhist text, mentions nearly 75 occupations, most of which were concerned with various crafts. It describes a city as a meeting place of persons of diverse occupations—nobles and brāhmaṇas, merchants and work people.[2] However, some of the occupations and crafts mentioned in this text could flourish in rural settlements as well, but their mention in the context of urban professions suggests that these were not alien to urban economy. A more

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1. E. B. Cowell (trans. and ed.) *The Jataka I-VI*, passim.
2. The text gives the list of following categories of persons inhabiting a town—soldiers, standard bearers, officers and camp followers, troops of professional wrestlers, cooks and ivory-makers, barbers and bathing attendants; smiths and florists, workers in gold and silver, lid, tin, copper, brass, iron, jewellers, messengers, potters, salt-gatherers, tanners, carriage builders, carvers in ivory, rope-makers, comb-makers, cotton-thread spinners, basket-makers, bow-manufacturers, bow-string-makers, arrow fletchers, painters, dye manufacturers, dyers, weavers, tailors, assayers of gold, cloth merchants, dealers in perfumes, grasscutters, hawkers of wood, hired servants, people who live by gathering flowers and fruits and roots in the wood, hawkers of boiled rice, sellers of cakes, fishmongers, butchers, dealers in strong drinks, play actors, dancers, acrobats, conjurors, professional bards, wrestlers, corpse-burners, casters out of rotten flowers (*pupphakkhadaka*), savages, wildmen of the wood, swingers and jumpers and the slave girls of bullies. See T. W. Rhys Davids (trans.), *The Questions of King Milinda*, SBE, XXV-XXVI, 1890, Bk. V. 4, pp. 209-11.

or less similar description of professions and crafts can be deduced from the *Lalitavistara* another contemporary Buddhist work. The description of lofty mansions, golden networks and ornaments, oil, molasses, sugar, musical instruments, vessels made of costly metals and stones, dresses of different cloth, dyed in various shades and similar other details[3] may be taken to suggest that crafts like goldsmithy, mining, weaving, dyeing, tailoring, garland weaving, perfumery etc., flourished. All these crafts could flourish in towns only where there was great demand for such articles and the citizens could afford to purchase them.

The Buddhist *Avadānas* like the *Mahāvastu*, *Divyavadāna* and the *Avadāna Śataka*, which were compiled in the first four centuries of the Christian era, throw further light on the subject. Whereas the *Jātakas* mention only eighteen kinds of professional guilds, the *Mahāvastu* acquaints us with double the number of the craftsmen. There are almost two identical passages in this text (III.13, 442) which enumerate professionals and guildmen assembled at Kapilavastu and Rājagriha.[4] It appears from these references that both productive and non-productive professionals occupied an important place in the urban economy of Kapilavastu and Rājagriha.

The *Kāmasūtra* of Vātsyāyana and the *Mrichchhakaṭika* of Śūdraka, though assignable to the Gupta period, also give an idea of the numerous crafts and urban occupations. Thus the *Kāmasūtra* (III.1.16)[5] refers to sixty four arts in which a

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[3] R. L. Mitra (ed. and trans.), *Lalitavistara*, Calcutta, 1877, passim.

[4] The guildmen referred to in the *Mahāvastu* are the musicians (*gaṅdharvikas*), goldsmiths, bankers (*hairaṇyika*), cloak- sellers (*pravārika*), workers in shell and ivory, jewellers, workers in stone (*prastārika*), perfumers, sheath or box-makers (*kośāvikas* or *kauśikārās*), oil dealers, hawkers of jars of ghee (*gṛhitakundika*), sugar factors (*gaulika*), vendors of water (*varika*), factors of cotton, curds, cakes (*pupika*), dried treacle (*khandakaraka*), sweet-meats, kandu (*kunduka*-factor or dealers in some kind of eatable called *kandu*), wheat-flour and barley meal, hawkers of fruits, roots, perfumed oil from ground powder, *agrivaniyas* (?), *aviddhakas* (?), makers of confectionary from sugar and dried treacle, vendors of dried ginger (*sunthika*), distillers (*sidhukaraka*) and factors of candid sugar. The crafsmen present at Kapilavastu were brass founders, copper-smiths, goldsmiths, makers of wooden bowls (*iaddhukaraka*), *pradhvopakas* (?), *rosinas* (?), tin smiths, makers of lead-sheets (*sisapiccatakara*), workers in grass(*jantukaraka*), garland-makers, vegetable growers, potters, tanners (*carmakaras*), weavers of wool, makers of mail armour (*varuthatantravayakas*), weavers of robes for idols (*devatatantravayakas*), laundarymen (*cailadhovaka*), dyers, cleaners, spinners, painters (*citrakarakas*), carpenters (*vardhikarupakarakas*), carvers, basket-makers (*pelalakas*), modellers in clay (*pustakarakas*), plasterers (*pustakarmakaraka*), decorators (*lepaka*), builders (*sthapitasutrakaras*), barn-makers (*uptakosthakarakas*), miners (*kupakhanaka*), hawkers of fragrant earth (*mittikavahakas*), wood, grass, shrubs and twigs, sailors, boatmen (*olumpikas*), washers of gold (*suvarnadhovakas*) and tricksters (*maustikas*). See J. J. Jones (trans.) the *Mahāvastu*, *SEBE*, XVI-XVIII; *J. N. Banerjee Volume*, Calcutta, 1960, pp. 1-70.

[5] Some of these arts included the knowledge of music, dance, painting, colouring, garland-making, ivory work, perfume-making, the knowledge of making scented and sweet drinks, mechanical aids, ability to distinguish between genuine and fake gems, ornament-making, etc. See S. C. Upadhyaya (trans.), *Kāmasūtra of Vātsyāyana*, Bombay, 1974, pp. 76-78.

nāgaraka was to make himself adept. Although Vātsyāyana recommended such arts for the *nāgarakas*, it is possible that those proficient in these arts could adopt these as their means of livelihood and live in towns. The *Mrichchhakaṭika*,[6] gives some idea of the artisans and craftsmen who inhabited the city of Ujjaini. It appears from the drama that the merchants who lived in towns amassed fabulous wealth and the courtesans extracted much money from them. Such wealth led to the growth of many crafts and the production of luxury goods.

But by far the best account of professions and crafts is preserved in the *Aṅgavijjā*, a Jaina Prākrit text, originally compiled in the Kuṣāṇa period and improved upon in the Gupta period.[7] Chapter XXVIII of this text, entitled *Karmayonī adhyāya*, mentions five kinds of professions, i.e., government officers, trade and commerce, agriculture and animal husbandry, arts and crafts, and work on daily wages or labour.[8] Of these five kinds of occupations, except agriculture and animal husbandry, others found a congenial ground in towns. The texts give a long list of professionals and craftsmen.[9] It is evident from the *Aṅgavijjā* that numerous arts and crafts flourished under the Kuṣāṇas. Most of such crafts were connected with the urban economy.[10]

It is evident from the contemporary literature that towns were centres of crafts and commerce where most of the population depended for its livelihood either on some sort of craft, commerce or on employment offered by the state, rich merchants or industries. Though the material culture, as described in these texts, may appear to be somewhat exaggerated, there is more truth than fantasy in these details. Our lawbooks, epigraphic evidence and the archaeological excavations made at numerous sites in India indicate the existence of many crafts.

The early lawbooks of Manu (200 B.C.-A.D. 100), Yājñavalkya (100 B.C.-A.D. 300) and Viṣṇu (A.D. 100-300) refer to occupations and crafts prescribed for different varṇas in the brahmanical social set-up. Manu ordains that "learning, mechanical arts, work for wages, service, rearing cattle, traffic, agriculture, contentment, alms and receiving interest on many, are the ten modes of subsistence (permitted to all

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6. M. R. Kale (trans.), *The Mrichchhakaṭika of Śūdraka*, Motilal Banarsidass, 1972 (3rd revised edn.), passim.
7. V. S. Agarawala, "Introduction", in Munishri Punyavijayji (ed.) *Angavijja*, Prakrit Text Society, Varanasi, 1957, p. 94.
8. *Angavijja*, XXVIII, 20, p. 159. "तत्थ कम्मं पंचविधं पुव्वमाधारचित्व्वं भवति। त जधा—रायपोरिसं ववहारे कसिगोरक्खं कारूककम्मं भतिकम्मं पंचम भवति ।।
9. Important ones in this list were traders, navel architects, boatmen, goldsmiths, dyemakers, and dyers, iron-smiths, potters, silk weavers, cloth-dealers, toilet-makers, perfumers, actors, lapidarists, architects, barbers, physicians, etc. See Motichandra, "Introduction to *Aṅgavijjā*", *ibid.*, pp. 35-55.
10. The information gathered from the *Aṅgavijjā*, on urban occupations is further supplemented by the *Śilāppadikāram*, a work of about the 2nd century A.D. This text forms part of the Sangam literature and contains valuable material on crafts, occupations, inland and foreign trade and town life of the Tamils during the early centuries of the Christian era.

men in distress)".[11] Of these means of livelihood, excepting cattle rearing and agriculture, other modes of subsistence had better prospects in urban settlements than in rural ones. Undoubtedly some of the professions and crafts are common to villages and towns, but the crafts which flourished in urban settlements had comparatively larger demands and consumers. Therefore the urban crafts had wider range of market and fared better than its counterpart in the rural economy.

The details of different wares, precious gems, clothes and ornaments presuppose flourishing crafts in these items. Certain professionals are also mentioned in the lawbooks. Manu asks the king to banish from town persons like gamblers, dancers, singers, cruelmen, persons belonging to heretical sects, those following forbidden occupations and sellers of spirituous liquor.[12] To the orthodox brahmanical school such professions as dancing, singing, prostitution and butchery came under the condemnable category, but the fact that they find place in the lawbooks makes their existence certain. The Smṛtis refer to such professions as physicians, paid servants, actors or singers (*kuśīlva*), keeper of a gambling house (*kiṭavāh*), astrologers, architects, messengers, carriers of dead bodies, oil manufacturers, musicians, carpenters, usurers, stage players, goldsmiths, basket-makers, dealers in weapons, washermen, weavers, traders, and so on.[13]

There is conformity among literary sources of the period, as regards occupations and crafts in the early centuries of the Christian era. Since most of the texts, mentioned above, were composed between the 1st and the 4th centuries of the Christian era, it may be inferred that the information preserved in these sources may apply to the Kuṣāṇa period.

But by far the best evidence supporting the existence of some of these occupations and crafts, is provided by archaeological excavations. The material relics discovered from Kuṣāṇa horizons over a widely dispersed area, in the shape of pottery, terracotta objects and figurines, metal, stone, ivory and bone objects, terracotta figurines with typical Kuṣāṇa headdresses, plaques and sculptural pieces depicting costume, coiffure and ornaments, beads of terracotta and semi-precious stones, copper, gold and iron objects, attest to the existence of a good number of

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11. G. Buhler, *The Laws of Manu*, SBE; XVI. X. 116. See also X. 81-83, 95, 98, 99-100, where Manu speaks of the mode of subsistence of the four varnas in distress. Similar idea is to be found in *Viṣṇu Dharmasūtra*. See J. Jolly (trans.), The *Institutes of Viṣṇu*, SBE, II. 10-14. Both Manu and Viṣṇu enjoin that the sudras were to earn their livelihood by learning all branches of arts. But there seems to be a great difference between the two. Manu says that "a sudra may maintain himself by handicrafts. Let him follow those mechanical occupations and various practical arts by following which the twice-born men are best served" (X.99-100), but Viṣṇu simply mentions all branches of art (such as painting and other fine arts) (II. 14). At any rate, however, it may be inferred that both these lawgivers were in favour of assigning arts and crafts as well as menial work to the lowest strata of the society, a practice which still continues, more or less, in the present social set-up.
12. *Manu*, IX. 225.
13. *Ibid*, III. 152-53, 155, 159, 162-63, 166; IV. 84, 210, 215-16; VIII. 397, 399. See also *Viṣṇu* LI. 7-15; XCI. 1-3, 9-10, 12 and *Yājñ*, II. 48 which refers to wine merchants (*saundikah*), dancer or an actor (*sailushah*), washerman, dyer of clothes (*rajakah*) and hunter (*wyudhah*).

craft groups in the Kuṣāṇa period. Some of the Kuṣāṇa inscriptions also refer to superintending engineers (*navakarmikahs*)[14], actors (*sailalkan*)[15], perfumer (*gandhika*)[16] goldsmith (*suvarnakara*),[17] big merchants (*setthi*),[18] leader of caravans (*sarthavaha*),[19] servant or priest,[20] cloak-makers (*pravakika*),[21] and so on.

All these evidences suggest the existence of numerous crafts and occupations in the Kuṣāṇa period. The character of the crafts discussed above also implies that they flourished in urban centres only. In fact, whereas agriculture, cattle rearing and other small crafts connected with land, forest and animals, with limited scope and localized markets, were the chief features of rural economy, the urban economy was dominated by a large number of professionals and craftsmen who earned more and produced for a wider circulation and consumption. In villages artisans were not as skilled as in towns. In villages the same person tilled the land, worked in fields, reared cattle and engaged himself in ancilliary crafts. But the urban professionals and craftsmen were more skilled, and manufactured articles for wider consumption, because they worked as whole-time artisans and craftsmen. This created specialized class of weavers, lapidarists, smiths, jewellers, sculptors, etc. With specialization crafts also became hereditary.

We may broadly categorize urban occupations and crafts under the following heads :

1. The service class, consisting of state officials, attendants and such other persons as worked on wages for others.
2. The amusement class included singers, dancers, actors and musicians.
3. The class of independent professionals was composed of merchants, physicians, barbers, washermen, astrologers, etc.
5. Persons connected with the working of clay, like the potters, terracotta figurines, modellers, brick-makers, well and tank diggers, etc.
5. Workers in textile industry.
6. Carpenters and wood workers.
7. Metal workers.
8. Stone workers.
9. Glass workers.
10. Workers in bone and ivory.
11. Makers of perfumes.

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[14] D. C. Sircar (ed.), *Select Inscriptions Bearing on Indian History and Civilization*, I, Calcutta, 1942, nos. 27, 43; *CII*, II, p. 28; *AR–ASI—FC*, 1908-09, p. 20.

[15] *EI*, I, no. XVIII.

[16] *JUPHS*, XXIII, pts. 1-2, no. B-2, p. 39; *IA*. XXXIII, no. 21; *EI*, X, p. 68.

[17] *EI*, XIX, p. 6.

[18] *Ibid.*, I, p. 1.

[19] *Ibid.*, XIX, p. 3.

[20] *IA*, XXXIII, no. 13, p. 102.

[21] *EI*, XIX, no. 1, pp. 65-66.

12. Liquor and oil manufacturers.
13. Leather workers.
14. Other miscellaneous occupations and crafts.

I. The Service Class

The service-class of professionals comprised state officers, armymen and a large number of attendants attached to the royal court and the elite. Contemporary literay works are full of references to such persons. However the Kuṣāṇa epigraphs do not convey much information about the royal officers. They record only officers like *kṣatrapa*, *mahaṣatrapa*,[22] *daṇḍanayaka* and *mahadaṇḍanayaka*.[23] *Kṣatrapa* and *mahakṣatrapa* were civil officials, whereas *daṇḍanayaka* and *mahadaṇḍanayaka* acted as semi-military officers.[24] Apart from mentioning these officers, the Kuṣāṇa records are completely silent about other functionaries. It is strange that in spite of the growth in the number of towns during the Kuṣāṇa period, we do not find any reference to town administration as evidenced in the *Arthaśāstra* of Kauṭilya and the *Indika* of Megasthenes. It is just possible that the Kuṣāṇa towns might have been administered either on the Mauryan lines or left in the charge of guilds. Whatever might have been the case the fact remains that some officers connected with administration lived in towns and earned their livelihood by serving the state.

Other persons belonging to this class were militarymen, watchmen, messengers, spies, priests, astrologers, charioteers, archers and those connected with the king and his court. These people depended on state and rich men of the society for their subsistence and lived in towns where they had better job opportunities. From the literary works we come to know about royal potters, jewellers, barbers, cooks, gardeners and royal bards.[25] Besides, there were also elephant trainers, valuers, gate-keepers, life guardsmen, female slaves[26] and so on. One of the Kuṣāṇa inscriptions, discovered from Mathura, also refers to a servant of the interior (*abhyamtaropastyakasa*).[27] Moreover the *Aṅgavijjā* contains a long list of officers (*mahapurisava*) like ministers, treasurer, chamberlain, chief of royal booth, officers-in-charge of water house, stables, conveyances, head of eunuchs, city-magistrate, incharge of slaugher houses, artificer of weapons, and so on. Since this text belongs to the Kuṣāṇa period, we may suppose that such officers did exist in the Kuṣāṇa period and formed part of the urban population. Thus a large number of urban people depended on services offered by the state as well as rich persons of the society.

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[22] *EI*, VIIIa.

[23] *CII*, p. 145.

[24] R. S. Sharma, *Aspects of Political Ideas and Institutions in Ancient India*, Motilal Banarsidass, 1968, p. 222.

[25] *Jātakas*, I. 4; II. 220; III. 421; V. 531. 544.

[26] *Ibid.*, I. 105; II. 155; III. 318; VI. 544. See also, *Mahāvastu*, II, 34; H. Kern (trans.), *The Saddharmapundarika*, SEB, XXI, IV. 7, 17, 19, 22; XI. 43-45ff; EH. Johnston (ed. and trans), *The Saundarananda of Asvaghosa*, VI. 35; IV. 26ff., *The Lalitavistara*, p. 138 refers to eight types of nurses.

[27] J. Ph. Vogel, *Archaeological Museum at Mathura*, Delhi, 1971 (Reprint), pp. 143-44. The inscription was discovered on a fragmentary railing pillar at chaubāra mound and read as; "Abhyaṁtaropastāyakasa Kathikasa dānam", on the basis of numismatic evidence this inscription has been assigned to the period of Kaniṣka.

II. Amusement Class

Numerous contemporary references suggest that many persons adopted public entertainment as a profession. Such persons were to be found in rural as well as urban settlements, but the chances of their getting enough money was greater in towns than in villages. The *Bhuridatta Jataka*,[28] clearly reflects the mind of such professionals who flocked to towns to earn more and more money. In fact towns had become an abode for musicians, singers, actors, dancers, acrobats, etc., who received encouragement and patronage from the state and other affluent sections of the society.

The literary texts are full of references to musicians like drummer, conch blower, lute player and musical instruments like drums, tabourus, conches, tambours, tambourines, different kinds of cymbals, lutes, gongs and other musical instruments.[29] At one place we are informed that musical instruments numbering hundred were played in the house of Subandhu on the occasion of a birthday celebration.[30] All these allusions presuppose a good number of skilled craftsmen who prepared different kinds of musical instruments made of clay, reed bamboo, metal, leather etc. The popularity of song and music also suggests a class of professional music teachers to teach girls and boys of well-to-do families.

Our sources also speak of dance and drama performed by professional dancers and actors. They earned money by performing public or private shows and received encouragement from the urban population. Apart from several literary references to singing and dancing, some of the Gandhara and Mathura sculptures depicting a young man and his wife playing on a tambourine and keeping time with his left feet, his wife playing on a two-stringed mandoline, the dancing pose of a lady carved on a round pillar, and similar other scenes,[31] strongly suggest the popularity of song and dance in the Kuṣāṇa period.

Different types of dramas and actors also find mention in the contemporary literary works. The actors of Mathura going as far as Banaras to perform dramatic plays are noticed in the *Mahāvastu*.[32] *Natarangasabha* or dramatic stage, actors

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[28] *Jātaka*, VI. 543.

[29] *Ibid.*, I. 59, 60; II. 327; VI. 544.

[30] *Mahāvastu*, II. p. 375. Five types of musical instruments (*pancangika turyani*) are also mentioned in this text (p. 142). The text places musicians in the category of the *Gandharvikas* (III. p. 443). For musicians and musical instruments, see also *Lalitavistara*, V, pp. 75-6; VIII. p. 121; *Saddharma Pundarika*, II. 29, 89-91; *Silappadikaram*. I. III. 26-36ff; *Kāmasūtra*, III. I. 16 and *Angavijja*, p. 160.

[31] B. N. Puri, *India Under the Kuṣāṇas*, Bombay, 1965, pp. 95-6.

[32] *Mahavastu*, II. p. 169.

(*kusilako, kusilava*), mock-dancers, actresses, and public theatre of the city are also referred to in these works. Moreover, the *Nātya Śāstra* of Bharat Muni, describes ten kinds of plays,[34] and the *Rayapaseniya*, mentions as many as thirty-two kinds of dramatic plays.[35] These references indicate the popularity of drama as a means of amusement. It is possible that some actors might have adopted acting as a profession, either independently or in groups or might have got employment in royal courts. The importance of actors and their wealth becomes clear from a Kuṣāṇa epigraph which records the setting up of a stone slab in the place of the abode of Dadhikara, by the sons of the actors (*sailalkan*) of Mathura, who are praised as Chandaka brothers.[36]

Under the present category mention may also be made of other professionals like jesters, wrestlers, rope-dancers, snake-charmers, etc. The *Kamasutra* even refers to *vita*, *vidusaka*, *vaihasika* and *pithamarda*. These persons were known as *upanagarakas* and were advised to earn their bread with the help of *nagarakas* and *ganikas*.[37] Thus the urban growth produced a class of professionals who subsisted on such acts of entertainment like dance, drama and music.

III. Independent Professionals

In this category may be placed merchants, prostitutes, physicians, lawyers, barbers, washermen, tailors, astrologers, etc. They generally carried on their business individually and independently, though sometimes they were also employed by the state as well as attached to rich persons. The merchants, their trading activities and wealth form a recurrent theme of the contemporary literature. Thus, the merchants worth eighty crores are oft repeated in the *Jatakas*. The word *sethi* (modern seth) also finds place in a Kuṣāṇa inscription from Mathura.[38]

Gaṇikās or prostitutes formed another important class of urban professionals. Enormous increase in the wealth of townsmen made their life ease loving and luxurious. The prostitutes provided a source of amusement to them and fattened on their wealth. There are innumerable references to *gaṇikās*, their fabulous wealth, character, charming qualities, proficiency in songs, music and dance, tactics of alluring customers and the types of persons who visited them. From the *Jātakas* it appears that Banaras was famous for prostitutes where Sama, Sulasa, Kali and other protitutes lived and charged exhorbitant prices from their customers.[39] The mind of the prostitutes is best reflected in the following words : "Here am I, a harlot in this city of Pataliputra, by the sale of my body do I gain my livelihood. ...whosoever, O king, gives me gold—be he a noble or a brahmana or tradesman

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34. Ten kinds of plays mentioned in this text are *nataka*, *prakarana*, *anka*, *vyayoga*, *bhana*, *samavakra*, *vithi*, *prahasana*, *dima* and *ihamrga*. See M. M. Ghosh (trans.), *Natyasastra* I, Calcutta, 1967, XX, p. 353.
35. J. C. Jain, *op. cit.*, p. 184.
36. *EI*, I. no. XVIII, p. 390.
37. Sri Devdutta Sastri (ed.), *op. cit.*, pp. 149-50.
38. *EI*, I, no. 1, p. 381.
39. *Jātakas*, III. 318, 425; IV. 481.

or servant—I regard him alike...Free alike from fawning and from dislike do I do service to him who has bought me..."[40] The *Kāmasūtra* of Vātsyāyana also discusses, elaborately the qualities and life of prostitutes.[41] The prostitutes belonged to several sub-classes. Some of them carried their profession independently, others ran brothels while still others were attached to royal courts and came to be known as courtesans. They lived in large numbers in capital cities and commercial centres where they could get patronage from the state, and rich merchants who had both money and time to indulge in such things.

It appears from the literary sources that the prostitutes led a life of comfort and wealth. Several other professions like those of flower-garland-makers, perfumers, sellers of wine, sweets and betels, etc., thrived on account of great demand of such articles by courtesans and their customers. No stigma was attached to the profession of the *gaṇikas* and some of them were even admitted to the Jaina church. This can be inferred from a 2nd century inscription from Mathura. Inscribed on an *ayagapata*, it records the erection of a shrine of the Arhat, a hall of homage, cistern and a stone slab at the sanctuary of the Nirgrantha Arthats by *gaṇika* Lonasobhika.[42]

Other professionals in this category were physicians, who were well acquainted with diagnoses of diseases, prepared medicines and cured patients. From the *Saddharam Pundarika* we gather that physicians were not only adept in curing diseases but also prepared medicinal herbs with equal proficiency.[43] The *Aṅgavijjā* mentions different types of physicians, e.g., *vejja*, *kayategicchhaka* (healers of the body), *salakatta* (surgeon), *salaki* (eye-surgeon), *bhutavijjika* (witch doctor), *komaravichha* (physician for children) and *visithika* (poison doctor).[44] Manu reserves the occupation of the physicians for the Ambasthas.[45] All these references imply that the occupation of the physicians was very popular in ancient times. Some of the physicians must have been attached to royal courts, but majority of them would have worked as independent practitioners in towns.

From few references to lawyers in the *Jātakas*[46] and *Kāmasūtra*[47] it may be inferred that the legal profession had also emerged in towns and lawyers were

[40] *Milinda.*; IV. I. 47.

[41] *Kāmasūtra*, VI. 1-9. Interesting information about prostitutes is preserved in the, *Mahāvastu*, II, I, III. 164-75; II. XI. 165-91; XIV. 70-5; 76-82. pp. 162-63; III. p. 443, and the *Silappadikaram* where it is mentioned that the courtesans charged 1008 pieces of excellent gold-Both *Manu* (IV. 85) and *Viṣṇu* (LI. 7) refer to brothels and harlots. In the *Mrichchakaṭika* Vasantasena, a rich courtesan of Ujjaini, is addressed by ten different names. (Act I. 23).

[42] J. Ph. Vogel, *op. cit.*, pp. 184-86.

[43] *Saddharam Pundarika*, V. 44, p. 130; VII. 8, pp. 130-31. We are told here a story in which a physician, in order to cure a blind person, went to the Himalayas in search of medicinal herbs. He got it, prepared a drug and by administering it was able to return the eye-sight of a born blind man.

[44] *Aṅgavijjā*, p. 161.

[45] *Manu*, X. 47.

[46] *Jātakas*, II. 155.

[47] *Kāmasūtra*, VI. 1.9.

recognised as a separate class of urban professional. When Smṛti laws were formulated and the judicial administration became complicated, there emerged a class of persons whose sole occupation was to explain laws to general masses on payment. Such people came to be known as lawyers. Although the judicial administration in ancient India was a royal prerogative, it is possible that lawyers might have helped independently in the administration of law and justice.

Scribes were other important professionals inhabiting towns. The development of *Kharoṣṭhī* and *Brāhmī* scripts, the discovery of a large number of Kuṣāṇa inscription and seals engraved on clay and stone, suggest the existence of scribes. There must have been a class of skilled engravers, whose services were either hired by the state or other persons who needed them. It is also apparent that there were separate scribes for stone, metal and clay, because writing on different materials required varied skill. The paleographic evidence suggests that Sāñchī, Mathurā, Kauśāmbī, Sārnāth, Śrāvastī, etc., flourished as important centres of scribes with their own specific styles. The *Brāhmī* script of northern India was separated into two distinct styles, the eastern and western. Mathurā was famous for the western style of writing while Kauśāmbī for the eastern. Some literary references also suggest the existence of scribes. For example, Yājñavalkya advises the king to protect his subjects from the *Kāyasthas.*[48] According to Mitaksara on Yājñavalkya the word *kāyastha* denotes accountants as well as scribe. Perhaps the scribes used to manipulate royal grants or other endowments in someone's favour or disfavour and this may have prompted Yājñavalkya to advise the king to protect his subjects from the *Kāyasthas*. *Viṣṇu* also prescribed regulations for engraving deeds of grants.[48a]

Amongst other independent professionals were teachers, barbers, astrologers, charioteer, carrier of dead bodies, etc. From many literary references in the *Jātakas* we come to know that Banaras and Taxila flourished as important educational centres where world famed teachers imparted education to students. However, it is difficult to suggest whether the teachers were appointed by the state or other charitable institutions or they themselves ran educational centres. Possibly they were employed by state and trusts and did not run *gurūkulas* as we notice in the Vedic period. The profession of the barbers was also popular in towns. Both literary and archaeological sources speak of the barbers. An inscription mentions *rājnapita* or the king's barber or the head of the barbers[49] which implies that there were special barbers for the royal family.

The literary evidence thus suggests the existence of many urban professionals who worked independently, though some of them worked exclusively either for the state or selected rich persons of the society. It may also be pointed out that these professionals were to be found both in rural and urban settlements, but those working in towns were more skilled and better off than their counterparts in villages.

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[48] *Yājñ.* XXX. 336.

[48a] Viṣṇu, III. 82.

[49] *IC*, XII, no. 1, p. 85.

IV. Persons connected with the working of clay

The potter's craft was one of the most important and popular crafts in ancient India as is indicated by the huge amount of pottery unearthed in course of excavations. The objects produced out of clay were pottery of diverse types and shapes, terracotta figurines, beads, rings for wells, toy-carts, decorative pieces and other household objects. The wide range of fabric, texture and shapes of pottery indicate the existence of skilled potters who specialized in the manufacture of different varieties.

The literary sources and some inscriptions suggest the flourishing condition of potter's craft. It appears from the *Jātakas* that there were some potters who manufactured potteries exclusively for the royal court and even employed apprentices to assist them in their craft.[50] The *Aṅgavijjā* also refers to the *Kumbhakaras*.[51] The potters were often organized into guilds. Such a guild of potters (*Kulairikas*) is mentioned in one of the inscriptions which suggests the flourishing conditions of potter's craft.[52]

The pottery of the Kuṣāṇa period has been discovered from a number of town sites in Pakistan (Saikhan Dheri, Taxila) and India (Punjab, Rajasthan, U.P. and, Bihar). The principal sites yielding Kuṣāṇa pottery in India are Puṣkalāvatī, Taxila, Kurukṣetra, Purānā Quilā, Noh, Bairat, Hastināpur, Mathurā, Śrāvastī, Kauśāmbī, Rājghāṭ, Chirand, Sonpur, Buxar, Vaiśālī and Kumrāhar. The discovery of pottery from these urban sites implies the local manufacture in towns itself or in their vicinity, because unlike the NBPW the Kuṣāṇa redware was not a deluxe ware which could have been an item of trade. Moreover, potter's dabbers and stamps discovered from some of these sites[53] also suggest the local manufacture of pottery in Kuṣāṇa towns.

The pottery of the Kuṣāṇa period falls in two groups, one found in north-west Indian sites like Saikhan Dheri and the other in the Gangetic valley. The first category consists of sophisticated pottery and is represented in red and grey colours. The types include dishes, strap-handled vases, troughs, bowls, lids, basins and graceful pedestalled chalices. Some of the shapes like the ubiquitous lid and bowl and common vase are similar to those discovered from the Gangetic sites, but the majority of them exhibit foreign influence and seem to have evolved from the Scytho-Parthian ceramic traditions.[54]

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[50] *Jātakas*, I. 4; V. 531.

[51] *Aṅgavijjā*, p. 160.

[52] *Luder's List*, no. 1137.

[53] Potter's dabbers and stamps have been reported from Taxila (Marshall, *Taxila*, II, p. 424; stamps for stamping pottery, textiles, etc., *ibid.*, p. 437); Kurukṣetra (*IAR*, 1970-71, p. 31); Noh (*IAR*, 1971-72, p. 42); Mason (*IAR*, 1967-68, p. 52); Hastinapur (*AI*, nos. 10-11, p. 87); Rajghat (*IAR*, 1960-61, p. 39); Kausambi (*MASI*, 74, p. 74); Kumrahar (A.S. Altekar and Vijayakant Mishra, *op. cit.*, p. 129); Sonpur (B.P. Sinha and B.S. Verma; *op. cit.*, p. 124) and Chirand (personal knowledge).

[54] *CAKP*, I, p. 93.

The pottery belonging to the Gangetic valley is not impressive, though characterized by certain individualistic features and innovations. It is entirely of monochrome redware turned on wheel. The fabric ranges from medium to fine. The ware is essentially unpainted. It is fired at a medium temperature and often shows unoxidised smoky core. With the common use of metals, the ceramic industry seems to have lost the artistic merit and has been relegated to the background. The general reportory of shapes is marked by monotonous conservatism with few types adopted for specific use. These include the widely distributed bowls with tapering sides, lids with central knobs, common vases, basins, sprinklers, bottle-necked jars, etc. These pots were evidently intended to serve the needs of the general masses for use in kitchens. There was no deluxe table ware.[55]

The two representative sites yielding the Kuṣāṇa pottery are Taxila (Sirkap, Sirsukh) and Kauśāmbī. The main types at Taxila include storage jars, oil and wine vessels, narrow-necked flasks for oil, large water pots, water bottles to be used in journey, cooking pots, spouted pots, handled jugs, drinking cups, breakers and goblets, bonds and saucers, pans, dishes, frying pans, sprinklers, lamps, inkpots, etc.[56]

Most of the pottery types noticed at Taxila recur in Punjab and the Gangetic valley, but some of them are conspicuously absent in these areas. Thus, the Roman amphora is not to be found in the Gangetic valley. At the same time, new shapes in pottery, influenced by the Śaka, Parthian and Kuṣāṇa traditions, unnoticed earlier at Taxila, are found here. It is interesting to note in this connection that some of these types are distributed over a wide area, associated with the Śaka-Parthians and Kuṣāṇas in Iran, Afghanistan and Central Asia.[57] It was due to the Śaka-Kuṣāṇa influence that carinated waisted vassels, beakers and goblets with flat rims footed base and flared mouth, incense burners with looped handles and possibly *surahis* with decorated handles, cylindrical conical goblets and vases came to be produced in the Kuṣāṇa period.[58]

Some of the pottery types of the Śaka-Kuṣāṇa period noticed at Kauśāmbī had scratched designs externally. These designs were made after the pottery had been fired. The depiction on pottery included latticed designs, opposed triangles alternately filled in horizontal lines, wedge-pattern, opposed triangles arranged in such a way as to form a rhombus, triangles and wavy lines, loops and spirals, parallel wavy lines in a single or double row, branch of tree, tree schematic floral designs, etc. Similar designs were noticed on the pottery of Ferghana and Khorezm also.[59]

[55] *CAKP.*, pp. 92-3. See also *AI*, no. 4, pp. 48-50.

[56] For details see Marshall, *op. cit.*, II, ch. XXIII and *AI*, no. 4, pp. 48-72. A. Ghosh mentions 77 types of pottery from Sirkap. The details regarding the pottery of Sirsukh are not known on account of the partial nature of excavations. But from here also were discovered handled jugs and vessels like cup, bowl, lamp, miniature vases etc. See Marshall, *op. cit.*, I, p. 220.

[57] *CAKP*, II, p. 30.

[58] *Ibid.*, pp. 30-33.

[59] *Ibid.*, See also *MASI* no. 74, pp. XVII-XVII.

Śaka-Kuṣāṇa pottery of the same type has been reported from Rupar, Hastināpur and Ahichchhatra. Ahichchhatra has yielded almost all the vessel types of Kauśāmbī. Carinated waisted vessels and beakers are found at Vaiśālī in Period II (*c.* 150 B.C.-A.D. 100), Kumrāhar (Periods II-III, *c.* 150 B.C.-A.D. 300), Bhīṭā and possibly Rājghāṭ. 'Scratched decoration' on pottery is found at Sonpur and Chirand also.[60] Another typical Kuṣāṇa pottery is the sprinkler, reported from a number of sites like Taxila (Sirkap),[61] Purānā Quilā,[62] Hastināpur,[63] Manwan,[64] Mason,[65] Kauśāmbī,[66] Akhnur,[67] Sonpur,[68] Buxar,[69] Chirand,[70] Saradkel,[71] and Kumrahār.[72] All this suggests the flourishing condition of potters' crafts in the Kuṣāṇa period.

Other important craftsmen were clay modellers who prepared terracotta human and animal figurines, toy-carts, toys, votive tanks, rings for wells, beads and other miscellaneous objects like skin-rubbers, ornaments, lamps, spindle whorls, decorative pieces and other articles of general use like bricks, tiles, etc. Of all these, the clay modellers' craft was the most important. Terracotta figurines depicting costume, coiffure and ornaments have been unearthed from many town sites in India. The history of terracotta in India suggests that its large-scale production started only with the rise and growth of towns.[73]

The production of terracottas on an unprecedented scale in the post-Maurya, especially the Kuṣāṇa period, deserves some attention. With the growth of urban economy wealth began to be concentrated in towns. The wealthy class acquired not only the purchasing capacity, but also started patronizing arts and crafts. This made the modeller to depict in terracotta the life of the *nāgaraka* and produce terracotta on mass scale. They also made terracotta of religious connotation. Snakehoods, *naigameśas* and other representational deities were made. Thus both secular and religious motives influenced the clay-modellers of this period.

However, it is rather strange that despite high demand and a good market for terracottas, clay modelling of the Kuṣāṇa period reflects poor craftsmanship. This period has yielded, with few exceptions, largely coarse handmade figurines. This is quite in contrast to the urban sophisticated taste. This was possibly due to the fact that the elite showed its interest more in beautifully carved stone sculptures, plaques and even costly materials like ivory, bronze,[74] etc. This may support that handmade figurines were meant for the urban middle class who could not afford expensive artistic objects. It has also been suggested that as the potters community was busy in making tiles, pots, ring-wells and other religious objects, they might not have spared adequate time for clay modelling,[75] but this view does not seem to be convincing.

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[60] *CAKP*, pp. 30-33.

[61] Marshall, *op. cit.*, II, p. 420.

[62] *IAR*, 1969-70, p. 5.

[63] *AI*, nos. 10-11, pp. 31, 63.

[64] *IAR*, 1969-70, p. 44.

[65] *Ibid.*, 1965-66, p. 51.

[66] *MASI*, 74, p. 127.

[67] *IAR*, 1961-62, p. 17; 1962-63, p. 9.

[68] *Ibid.*, 1960-61, p. 5; 1959-60, p. 14.

[69] *Ibid.*, 1965-66.

[70] B.P. Sinha (ed.), *Potteries in Ancient India*, Patna, 1969, p. 196.

[71] *IAR*, 1964-65, p. 6.

[72] A.S. Altekar and Vijayakant Mishra, *op. cit.*, p. 76. Sprinklers have been reported from Rajghat also but they belong to a late period (Period IV, A.D. 300-700). See *IAR*, 1960-61, p. 39.

[73] Devangana Desai, "Terracottas and Urban Culture of Ancient India" (*c.* 600 B.C.-A.D. 600)", paper presented to the Symposium on Art and Society held at the Calicut session of the Indian History Congress, 1976.

The principal sites yielding terracotta figurines with Kuṣāṇa features are Taxila, Mathurā, Hastināpur, Ahichchhatra, Kauśāmbī, Chirand, Buxar and Pāṭaliputra. The figurines exhumed from these sites include human as well as animal and bird figurines. The terracotta of Taxila (Sirkap), belonging to this period, is marked by western influence. The types represented are "nude mother or earth goddess", female deity, male figure in Hellenistic dress, male and female figures standing side by side and Buddhist terracotta and clay figurines.[76] Terracotta figurines of 'Mother Goddess', *mithuna* figures, dwarfs, miniature dwarfs, female dwarfish figures, dwarf musicians, figures of gods and goddesses and cult images have been reported from Hastināpur. Some of these reveal Kuṣāṇa features like tenon-head, facial features, dress and ornaments. The animal figures are dominated by humped bulls.[77]

Terracotta figurines of Kauśāmbī depict new ethnic features, resembling those of the Kuṣāṇa-Yuechi, such as long face, prominent nose, protruding lips, prominent cheek-bones and sunken cheeks. The types represented, apart from male and female figurines, are those of *naigameśa*, similar to those discovered from Mathura, and Ahichchhatra, snake-hoods and mother goddesses. Though the specimens are crude, they unmistakably suggest clay-modeller's acquaintance with new ethnic features and thus provide a definite evidence of the deep penetration of the Kuṣāṇas in the Gangetic valley. Amongst animal figurines cows and buffalos are conspicuously absent.[78] Terracotta, characterized by Kuṣāṇa type of dresses and non-Indian faces, were also discovered from Buxar, Kumrahār and Chirand. It is evident, thus, that the clay-modeller's art was well-developed in the Kuṣāṇa period, though terracotta of this period was generally bereft of the elegance which characterized earlier terracottas.

Apart from pottery and terracotta figurines, the discovery of large number of terracotta rings for wells, votive tanks, bricks, tiles, decorative pieces and other miscellaneous objects like skin-rubbers, wheels, weights, balls, earlobes, bangles and beads of various designs discovered from many Kuṣāṇa sites indicate the existence of potters' craft during the period.

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74. Ivory figurines and plaques artistically carved have been discovered from Begram, reflecting the life of the rich men. A bronze image of a male deity, accompanied by a lion-headed *Maitrika* with a child in left arm, was discovered from Sonkh (Mathura), belonging to level 16, which represents the Kuṣāṇa period. See *IAR*, 1969-70, p. 42.
75. Devangana Desai, *op. cit.*, pp. 7-8.
76. Marshall, *op. cit.*, II, Ch. XXIV.
77. *IA*, no. 4, pp. 83, 105-71.
78. *MASI*, no. 74, pp. 53-70.

V. Textile Industry

The textile industry was one of the most important and flourishing industries of the period. The fine Indian muslin formed an item of foreign trade and was as much popular as the Chinese silk in the Romam world. The contemporary literary sources contain many references to weaving, dyeing, washing of clothes and cloth made of cotton, silk, hemp, linen, etc. The *Jātakas* refer to tailors, weavers, washermen and Kāśī cloth, manufactured in Banaras.[79] Cotton thread spinners, dyers, dye manufacturers, Banaras muslin and other cloths of various kinds are also noticed in the *Miliñdapanho*.[80] Similarly other texts throw interesting light on the manufacture of textile and its ancilliary industries.[81]

All these evidences suggest the flourishing condition of textile and associated industries in the early centuries of the Christian era. The textile industry supported a large number of associated artisans like washermen, tailors, embroiders, etc. It seems that cotton, silk, wool, hemp, linen, fur, etc., were used as clothing material. Banaras silk seems to have earned a fame. Mathurā might also have produced a good quality of cotton cloth because Pātañjalī mentions a special kind of cloth *sataka*, prepared here.[82] Later, Hsuan-Tsang also observed that Mathurā grew a fine quality of cotton.[83]

Archaeological evidence bearing on textile industry is sparse, but some epigraphic records also mention the weavers and dyers. Thus an inscription from Mathurā, records a dedication by a *rayagini* (wife of a washerman or dyer).[84] Guild of weavers is mentioned in a Nasik inscription.[85] A large number of available Kuṣāṇa terracottas and sculptures, which depict elaborate costumes and coiffure, also point to the development of this industry. Moreover, during the excavations at Raṅgmahal (Rajasthan), a few pieces of pottery with internal textile impressions were noticed. They give some archaeological evidence regarding the textile designs current in Rajasthan during the later Kuṣāṇa period. Plasticine impressions, which reproduced the designs of cloth used, exposed a series of loosely woven fabrics of both coarse and fine qualities. The materials used were cotton, linen and jute.[86] Another type of archaeological evidence regarding the weaving of textiles is supplied

[79] *Jātakas* I. 38, 80; IV. 453; VI. 542-43.

[80] *Miliñda*, I. 2, p. 3; I. 33, p. 27; V. 4, p. 210.

[81] *Mahāvastu*, I, pp. 191, 245, 255ff; *Saundarānanda*, IV. 38; V. 53 and X. 42 refers to clothes suited for different occasions; F. Max Muller (ed.), *Jaina Sūtras*, SBE, XXII, Bk. II, V. 1.4. refers to costly cloth of fur, goats' hair, blue cotton, common cotton, Bengal cotton, patta of Malaya fibres, of bark fibres, muslin and silk; the *Aṅgavijjā* ch. IX, gives a long list of clothes of different kinds as well as garments made of them. See also *Manu*, II. 44; IV. 216; VIII. 396-97; *Yajña*, III. 48, VIII. 186-87 and *Viṣṇu*, III. 82; V. 83; VI. 13, 16ff.

[82] Cited in R.S. Sharma, *Light on Early Indian Society and Economy*, Bombay, 1966, p. 75.

[83] S. Beal, *Buddhist Records of the Western World*, Delhi, 1969 (Indian reprint), IV, p. 180.

[84] *EI*, I, no. 5, p. 384.

[85] *Luder's List* no. 1133.

[86] G. L. Adhya, *Early Indian Economics*, Asia Publishing House, 1966, p. 75. The recent excavations at Katrā (Mathura) have brought to light from the fortification, assigned to the Śaka-Kuṣāṇa period, a sherd bearing fine impressions of cloth. See *IAR*, 1973-74, p. 32.

by a number of spindle whorls from some Kuṣāṇa sites such as Saikhan Dheri,[87] Taxila (Sirkap)[88] and Hastināpur.[89] Thus literary and archaeological sources suggest the flourishing condition of textile industry during this period.

VI. Carpentry

Carpentry was another important craft. The extensive use of timber as a building material, household furnitures, chariots and boats made the profession of carpenters prosper. There are copious references to carpenters and wooden objects in the contemporary literary works like the *Lalitavistara*, *Mahāvastu*, etc. The most interesting literary evidence is that of the *Aṅgavijjā* which refers to *asandana* (sedan chair), *janaka* (car), *gholi* (horse-palanquin), *sagada* (bullock cart), *sagadi* (small bullock cart) and similar other wooden objects. The text also refers to several kinds of boats, apparently made of timber. These were *nava*, *pota*, *koṭṭimba*, *salika*, *ṭappaka*, *plava*, *piṇika*, *kaṇḍevelu*, *dati*, etc.[90] These references prove the craftmanship and skill of carpenters in the early centuries of the Christian era. The carpenters catered to the demands of the urban as well as rural population by manufacturing household objects, furnitures, and carts and boats, which were the chief means of conveyances. It is also possible that some of the musical instruments like lute, flute, *veena*, drum, etc. might have been partly manufactured by the carpenters. They might have also been connected with the manufacture of the objects of cane, reed and bamboo to which numerous references are found in contemporary literary sources. Some of the carpenters might have been employed by the state, for the *Aṅgavijjā* mentions the superintendent of wood (*darukadhikarika*)[91] who might have supervised the work of carpenters employed by the state.

However, the archaeological evidence for carpentry is lacking on account of the perishable nature of material in which they worked, but some epigraphs do refer to carpenters. Thus an inscription of Kaniṣka's 12th regnal year records a dedication by a lady who belonged to the carpenter (*vaddhakin*) class.[92] The fact that carpenters could make donations and get them inscribed suggests the high status acquired by them. Evidently they gained high social status, and money for dedication through their craftmanship which was in heavy demand.

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[87] *AP*, II, p. 128. Although listed as stone beads, they were most probably spindle whorls. The largest number was reported from the middle Kuṣāṇa level (time of Kaniṣka and Huviṣka).

[88] Marshall, *op. cit.*, II, p. 502. He also refers to stamps for stamping textile, *ibid.*, p. 437.

[89] *AI*, nos. 10-11, p. 89. Spindle whorls were discovered from an early level of Period IV and had grooved lines. Some reels were also discovered which might have been used for reeling yarn.

[90] Motichandra, *op. cit.*, pp. 38, 47. *The Periplus of the Erythraean Sea* (60) mentions large vessels made of single logs, bound together and known as *Sangara*. The other types of boats, used for crossing the Ganges, were termed as *Colandia*. These correspond to *Sanghad* and *Pota*, respectively of the *Aṅgavijjā*. The *Periplus* (44) also refers to *trappaga* and *cotyamba* types of boats which compare well with *tappak* and *Kottimba* of the *Aṅgavijjā*. See Y. Mishra, "*Prachin Bharatiya Byapar aur Samudra Yatra*", *Journal of the Bihar Research Society*, XLII, pts. I-IV, pp. 16-17 and 21. Apparently these boats were made of wood and their mention in two contemporary works may suggest the flourishing condition of carpenters, especially those specializing in boat making.

[91] *Ibid.*, p. 47.

[92] *EI*, IX, no. 2, p. 239.

VII. Metal Industry

Mining and metallurgy was another industry which thrived under the Kuṣāṇas. This included the working in ordinary and precious metals like iron, copper, bronze, tin, lead and gold. Silver seems to be a rare metal. These metals were utilised in the constructions of household utensils, weapons, ornaments and coins. Literary sources suggest different craftsmen in each of these metals. Although the archaeological evidence for metal work is not very encouraging as most of the material remains have been destroyed by time and weather, some evidence from Kuṣāṇa sites suggests a highly developed knowledge of metallurgy during the period.

Iron

Iron was one of the cheapest and the most common metals easily available in India. The easy availability of iron helped the development of iron technology. The blacksmiths made weapons and household utensils of iron. The metal might have been also used in the construction of boats, carriages and chariots. The literary works and epigraphic records of the Kuṣāṇa period invariably refer to blacksmiths and their craft.[93] Some of the inscriptions of the Kuṣāṇa period mention donations made by the blacksmiths. Thus the Mathura Kankali Tila Jain image inscription of the year 20 of Kaniṣka's reign records the dedication of Mitra, the daughter-in-law of Vihara, the *lohakāra* and the daughter of Jayabhatti, the *maṇikāra*.[94] It is evident from this record that blacksmiths had acquired great status in the society due to their skill and wealth earned through it, so that a *lohakāra's* son could marry a jeweller's daughter and make donations. The prosperity of ironsmiths is further attested by the *Periplus of the Erythraean Sea* which refers to the export of Indian iron and steel from Ariaca (the Gulf of Cambay) to African coast.[95] However, it has been suggested that the Indian iron exported to foreign countries was in the form of ingots or pieces of unprocessed iron and steel and not that of consumer goods.[96]

[93] *Jātakas*, II. 240; III, 387; V. 522; *Lalitavistara*, p. 331; *Miliñda*, p. 210. *Mahāvastu*, II, pp. 80, 103, 120. Curiously enough the blacksmiths are not included in the list of guilds or craftsmen assembled at Kapilavastu and Rajagriha, although makers of iron pans (*kandukaraka*) and mail armour (*varuthatantravayaka*), possibly made of iron are mentioned in the *Mahāvastu*, III, pp. 110-13 and 443-44. *Lohakāra* (ironsmith) is also mentioned in the *Añgavijjā*, p. 163.

[94] *EI*, I. 4, p. 383., *ibid.*, XXI. p. 391; *Luder's List*, nos. 29, 51, 54.

[95] W.H. Schoff (trans.) *The Periplus of the Erythraean Sea*, Delhi, 1974 (2nd reprinted edition), 6.

[96] G.L. Adhya, *op. cit.*, p. 53. Adhya also suggests that the rigid caste system advocated by the *dharmaśāstras*, discouraging industrial pursuits by higher *varṇas*, abundance of raw material, lack of patronage from private businessmen and the state, adversely affected the industry (pp. 92-3). However, it is difficult to agree with the view because literary references cannot all be dismissed as being imaginary.

The excavations at many Kuṣāṇa sites have brought to light specimens of iron objects, crucibles and slags which suggest working in iron. The House of Nārdakha at Saikhan Dheri has yielded a good number of iron objects. These include various types of nails, door knobs, door hooks, chains, door shutters, timber joiners and varieties of keys. Three flanked arrow heads in different sizes were found throughout the Kuṣāṇa levels. Iron was used for making finger rings also. A broken double-edged straight sword, resembling those noticed in the Kuṣāṇa coins at the waist of their emperors, is an interesting discovery from the site.[97] Marshall groups the iron objects from Taxila into five classes, namely, household utensils, arms and armour, horse bridles and elephant goads, carpenters and blacksmith's tools and agricultural implements. He also reports iron objects of foreign prototype, current in the Graeco-Roman world of the 1st century A.D. Metal workers' portable furnace and cup-shaped crucibles were also discovered at Taxila. Majority of these objects were excavated from the city site of Sirkap.[98] Other important Kuṣāṇa sites which have yielded smelting furnace with iron slag, crucibles, household objects, tools and weapons like arrow-heads, axes, chisels, knives, ploughshares, etc. are Noh,[99] Purānā Quilā,[100] Kurukṣetra,[101] Hastināpur,[102] Mason,[103] Kauśāmbī,[104] Vaiśālī,[105] Kumrāhar,[106] Sonpur,[107] Saradkel,[108] Buxar,[109] and Chirand.[110] The discovery of the above-mentioned objects implies the thriving condition of ironsmithy in the Kuṣāṇa period.

Copper and Alloy

Next to iron, copper and bronze seem to have been easily available. Copper or coppersmiths do not figure in the *Jātakas*, but other sources indicate the existence of coppersmithy. Thus the *Miliñdapanho* informs us that vessels of copper are prepared by beating it. It also mentions copper and bronzesmiths.[111] Copper and brass objects are described in other contemporary literary sources also.[112] The uses to which these metals were put were the minting of copper coins, statues, articles of toilet, ornaments and objects of domestic use.

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[97] *AP*, II, pp. 119, 122.

[98] Marshall, *op. cit.*, II, chs. XXXIII-XXXIV.

[99] *IAR*, 1970-71, p. 62.

[100] *Ibid.*, p. 19.

[101] *Ibid.*, p. 31.

[102] *AI*, nos. 10-11, p. 97.

[103] *IAR*, 1965-66, p. 52.

[104] *MASI*, 74, p. 103. See also G.R. Sharma, *op. cit.*, p. 45.

[105] B.P. Sinha and S.R. Roy, *Vāiśalī Excavations* (1958-62), Patna, 1969, pp. 119-200.

[106] A.S. Altekar and N.K. Mishra, *op. cit.*, pp. 140-42.

[107] B.P. Sinha and B.S. Verma, *op. cit.*, p. 128; *IAR*, 1960-61, p. 5.

[108] *IAR*, 1964-65, p. 6.

[109] *Ibid.*, 1965-66, p. 11.

[110] See the chart on antiquities of Chirand.

[111] *Miliñda*, II. 3. 14, p. 96; V. 4, p. 210. The coppersmiths are referred to in the *Mahāvastu*, III, p. 112.

[112] *Saddharma Pundarika*, II. 83: *Acaraṅga Sutra*, VI. 1. 2; J.C. Jain, *op. cit.*, pp. 99-100; *Silappadikaram*, I. V. 24-39; *Manu*, V. 114; *Yajñ*, VIII. 190; *Viṣṇu*, III. 82, XXXIII. 25; Motichandra, *op. cit.*, p. 47.

Copper objects have been reported from many sites. Kuṣāṇa copper coins have been discovered in large numbers from several excavated sites. Other copper objects discovered include ornaments, toilet articles, household vessels, surgical and other instruments, tools and other miscellaneous objects like lamp, flute and some statues.[113] Some bronze objects have also been discovered from Kuṣāṇa levels at Taxila (Sirkap) and Mathurā.[114]

Iron, copper, bronze were metals of common use but gold and silver were precious metals and were used chiefly by rich persons. Gold was mainly used for making ornaments or coins. Several moulds of gold coins and coins discovered from excavations attest the minting of gold coins under the Kuṣāṇas. Gold coins were issued for the first time in large number during the Kuṣāṇa period. The Kuṣāṇas, possibly, minted gold coins to facilitate the growth of foreign trade, especially with China and the Roman empire.

The literary texts of the period are full of references to golden ornaments, other miscellaneous objects and proficient goldsmiths. But they seldom mention silver. It seems that either silver was more costly than gold or it was not found in sufficient quantity. Interesting details about gold and goldsmiths are to be found in the literary texts. Thus the *Saundarānanda* refers to the working in gold by goldsmiths (*kanakmih*) in fire and making various kinds of ornaments.[115] At another place we are told, "compare the goldsmith (*suvarṇakāro*) in this world who, placing gold in the mouth of the forge, applies the bellows at the proper time, wets it with water at the proper time and gradually at the proper time allows it to cool off. For by using the bellows at the wrong time he would burn the gold, by throwing it into water at the wrong time he would make it too soft and by letting it cool off at the wrong time he would not bring it to maturity properly."[116] All this suggests the skill of goldsmiths in their craft. However, most of these texts refer to jewellers as distinct from the goldsmiths. It appears that there was a separate class of jewellers which manufactured ornaments of all types, and that goldsmiths worked exclusively in gold. Both goldsmiths (*suvarṇakāra*)[117] and jewellers (*maṇikāra*)[118] find mention in the Kuṣāṇa inscriptions.

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[113] Marshall, *op. cit.*, ch. XXVIII. See also *AP*, pp. 121-32; *IAR*, 1960-61, pp. 5, 37; 1964-65, p. 6; 1967-68, p. 47; 1969-70, pp. 40, 42; 1970-71, pp. 31, 62; 1971-72, p. 42; *AI*, nos. 10-11, pp. 95-7; *MASI*, 74, pp. 93, 96 and 106; B.P. Sinha and S.R. Roy, *op. cit.*, pp. 195-7 and A.S. Altekar and V.K. Mishra, *op. cit.*, pp. 132, 135.

[114] *AI*, no. 4, pp. 78-9; *IAR*, 1969-70, p.42.

[115] *Saundarānanda*, XV. 68-9.

[116] *Ibid.*, XVI. 65-6. For other references to gold and goldsmiths, see *Jātakas*, I. 23, VI. 544; *Lalitavistara*, II. p. 29; III; pp. 34-5, v. p. 76, VI, p. 101 ff; *Miliñda*, V. 4, p. 210; *Mahāvastu*, II, p. 418, III, pp. 111, 443; *Śilāppadikāram*, I.V. 24-39, II. XIV. 201-4, Motichandra, *op. cit.*, pp. 41, 47, etc.

[117] *EI*, X, no. XII, p. 118; II, no. XXIII, p. 205; XIX, no. VI, p. 68.

[118] *Ibid.*, I, no. 4, p. 383.

The archaeological evidence for gold and silver is scarce. As they were valuable metals they were either melted away or stolen by the treasure seekers. Few specimens of gold and silver have been reported from excavations. Few gold coins including one of Wema Kadphises used as a button have been found at Saikhan Dheri.[119] Silver and golden objects of diverse use, especially ornaments with foreign influence, were noticed at Taxila (Sirkap).[120] Apart from some gold and silver objects, a standing human figurine in the Kuṣāṇa-Mathura style from Vaiśālī[121] and some golden *talismāns*, imitating the obverse and reverse of the Kuṣāṇa coins from Bodh Gaya, Shāh Kamāl Road in Patna City and Kumrāhar are of special interest.[122]

The literary texts of the period also mention other metals like tin, lead, zinc, brass, etc., but the archaeological evidence for their use is inadequate.

VIII. Lapidary

The working in stone was one of the most important industries of the early centuries of the Christian era. In fact, stone comes only second to pottery and terracotta in number and use. Objects like household utensils, architectural objects, ornaments, statues and beads were made of ordinary and semi-precious stones. Stone was used for inscribing inscriptions also. A large number of these objects discovered in course of excavations suggest the flourishing condition of stone industry.

References to stone and its use are preserved in the *Jātakas*, *Lalitavistara*, *Saddharma Pundarika* and other writings. The *Mahāvastu* speaks of workers in stone (*prastarika*) and jewels (*maniprastarika*).[123] In the *Maliñdapanho*, polishing, rubbing and purifying of diamond is mentioned.[124] The *Aṅgavijjā* also mentions *maṇikāra* and relief carver (*ruvapakkhara*).[125] Stone objects and gems find mention in the lawbooks also.[126] Corroborative evidence to these references in literary texts is available in the shape of many objects of stone and semi-precious stones excavated from several sites. These objects may be placed in four groups, viz., (a) household objects, (b) ornaments, (c) statues and architectural pieces, and (d) beads.

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119. *AP*, II, pp. 30, 37, 122 and 134,

120. Marshall, *op. cit*,, II, chs. XXIX-XXXI. Adhya takes these objects to be products of foreign hands, *op*, *cit*., p. 63.

121. B.P. Sinha and S.R. Roy, *op. cit*., p. 195.

122, A.S. Altekar and V.K. Mishra, *op. cit*., p. 131; B.P. Sinha and Lala Aditya Narain, *Pāṭaliputra Excavation* 1955-56, Patna, 1970, pp. 52-3.

123. *Mahāvastu*. III, pp. 111, 113 and 443.

124. *Miliñda*, II, p. 52.

125. Motichandra, *op. cit*., pp. 37-8, 47-8.

126. *Manu*, III, 68, V. 111; *Yājñ*, VIII. 182-3; *Viṣṇu*, III. 25, V. 87, XXXIII. 8ff. The *Silāppadikāram* notices sculptors, those who bored holes in them and mounted them and refers to working in gems. See, *ibid*., I.V. 29-39, 40-58 and II. XIV. 180-200.

(a) *Household Objects*

The excavations have brought to light several types of household objects. The noteworthy among them are grinding mill stones of granite, round in shape and made up of two parts, perforated ring stone, cylindrical grinding stones or pounders, querns, whet stone and sharpner, fragments of vessels like bowls, dishes and saucers, heart-shaped lamps from Saikhan Dheri,[127] and pivot stones, mullers, stool-querns, crushing mills, trays, toilet caskets, lamps,[128] burnishers and polishers of gold and silver articles, amulets, stones used for ornamental inlay work in wood, ivory, various moulds of ornaments and stone weights from Taxila.[129] More or less similar objects are reported from other sites like Hastināpur,[130] Rājghāṭ,[131] Vaiśālī,[132] Kumrahār,[133] Chirand and Buxar.[134]

(b) *Ornaments*

Sometimes stone was used for making ornaments. Finger rings made of precious stones and dagger-shaped pendants were recovered from Saikhan Dheri.[135] Stone finger ring of onyx, belonging to the 1st century A.D., was found at Taxila.[136] Agate was used sometimes for bangles.[137] Thus few pieces of stone bangles have been reported from Kauśāmbī,[138] Kumrahār,[139] Vaiśālī[140] and Sonpur.[141] But it seems that stone was very sparingly used for ornaments. Whatever stone ornament was used was in the form of beads which have been recovered in large quantity, almost from every excavated site.

(c) *Statues and Architectural Pieces*

There developed two distinct sculptural styles during the Kuṣāṇa period, one in north-western India known as the Gāndhāra style, and the other in northern India characterized as the Mathura style. In these two styles were carved statues of the Buddha, Mahavira, Bodhisattva and even of Kuṣāṇa kings. Architectural decorative pieces of stone are also found in large number from Mathurā. It appears from some of the statues and architectural pieces that the working in stone was highly developed during the Kuṣāṇa period. This is also supported by the Kuṣāṇa inscriptions engraved on some of the statues.

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[127] *AP*, II, pp. 29, 113-16.

[128] One of the lamps was inscribed in Kharoshī script and reads "Taksha(s) ilammi dhamarai (e Dhamadasa bhikskun) o (esha) saputrasa danamukhe (o)" and is assigned to about the beginning of the 2nd century A.D. See Marshall, *op. cit.*, II, p. 500.

[129] *Ibid.*, ch. XXV.

[130] *AI*, nos. 10-11, p. 90.

[131] *IAR*, 1960-61, p. 37.

[132] B.P. Sinha and S.R. Roy, *op. cit.*, pp. 201-02.

[133] A.S. Altekar and V.K. Mishra, *op. cit.*, pp. 137-39; B.P. Sinha and L.A. Narain, *op. cit.*, p. 48.

[134] See the chart.

[135] *AP*, II, pp. 121-22.

[136] Marshall, *op. cit.*, p. 649.

[137] *AI*, nos. 10-11, p. 90.

[138] *MASI*, no. 74, p. 93.

[139] A.S. Altekar and V.K. Mishra, *op. cit.*, p. 130.

[140] B.P. Sinha and S.R. Roy, *op. cit.*, pp. 191-92.

[141] B.P. Sinha and B.S. Verma, *op. cit.*, p. 113.

Some sculptural pieces, belonging to nearly 100 years of the Kuṣāṇa rule from Kaniṣka to Vasudeva, were discovered from Saikhan Dheri. These were made of grey and brownish or blue schist. The exposed pieces reveal two sub-styles. The earlier sculptures were made elegantly and have natural feelings whereas the later specimens tend to suggest that the figures had become stylized and conventional.[142] Marshall's excavations also brought to light many stone sculptures from Taxila.[143]

At Mathura, the most flourishing period of sculpture coincided with the reigns of Kaniṣka, Huviṣka and Vasudeva. Most of the inscriptions found on them or connected with them are in *Brāhmī* characters of the Kuṣāṇa period. The Mathura school of sculpture greatly influenced the contemporary Buddhist art in India and central Asia.[144] The excavations at Mathura have brought to light many Buddha and Bodhisattva, *Tirthamkara* and *nāga* images, several railing pillars, and other architectural pieces. These imply that the art of sculpture was well developed under the Kuṣāṇas.[145]

(d) *Beads of Stone and Semi-Precious Stones*

Bead-making seems to be one of the most flourishing industries under the Kuṣāṇas. Almost every excavated site has exposed a large quantity of beads of terracotta, ordinary and semi-precious stones. Glass, shell and even metals like copper were used for making beads. The beads were worn by both males and females as ornaments to decorate different limbs of the body. The terracotta figurines and stone sculptures of the period give an idea of the use of beads as ornaments.

Semi-precious stones like faience, carnelian, quartz, agate, soapstone, lapislazuli, granite, jasper, chalcedony, oriental topaz, moon stone and opal were used in the manufacture of beads. The manufacture of beads required expert lapidarists to bore and polish them.

The discovery of beads of semi-precious stones from Kuṣāṇa sites implies either local manufacture or some trading activity at those places. Very little evidence of unfinished material is available so as to suggest the local manufacture of beads, and it appears that beads had become so common that they were locally made. However, the material, except clay, must have been taken from one place to another for bead-making, because stone and semi-precious stones mentioned above, are not found in every part of India. The beads were made in different shapes so as to meet the requirements of ornaments and suit the aesthetic sense. Etching of beads was also known. Some of the principal Kuṣāṇa sites yielding beads of stone and semi-precious stones are Saikhan Dheri,[146] Taxila,[147] Noh,[148] Kuruksetra,[149] Hastinapur,[150] Sonkh,[151] Vaiśālī,[152] Pāṭaliputra,[153] Sonpur,[154] Chirand and Buxar.[155]

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[142] *AP*, II, pp. 38-40.
[143] Marshall, *op. cit.*, ch. XXXVI.
[144] J. Ph. Vogel, *op. cit.*, pp. 27-8.
[145] *Ibid.*, pp. 47-171.

IX. Glass Industry

Along with metal and stone industries, glass technology also made significant progress during the early centuries of the Christian era. Although the knowledge of making glass was known to ancient Indians as early as the 1st millennium B.C.,[156] the industry developed prominently during the 1st-3rd centuries A.D. Earlier it was considered to be a precious object and hence its occurrence is sporadic. But from the Mauryan period onwards, especially during the post-Maurya and pre-Gupta times, it became a commodity of common use. Now glass could be manipulated in different ways from the experience acquired through past centuries.

Some references to glass and lead are found in contemporary literature. Thus the *Miliñdapanho* refers to the *Sisakara*.[157] The makers of lead sheets (*sisapiccatakara*)[158] are mentioned in the *Mahāvastu*. In the *Divyavadāna* glass is compared to jewels (*kachamanyo ratna sadrisah*).[159] It appears that the working in glass and lead was very popular.

The articles made of glass were beads, bangles and mirrors which have come to light in course of the archaeological excavations. Some glass vessels were discovered at Taxila and Arikamedu, but they seem to have been imported from the Mediterranean countries or manufactured under the supervision of Roman experts. These vessels compare well with the "customs deposit" in Begram, attributed to the 2nd and early 3rd centuries of the Christian era.[160] Glass beads and bangles were unearthed at Saikhan Dheri.[161] Large number of glass objects like finger rings,[162] bangles,[163] vessels,[164] glass tiles of the 1st-2nd centuries A.D.,[165] and a large number of beads[166] were found at Taxila. These beads were of different colours. Six varieties of glass (lac glass, ribbed glass, swirled or marbled glass, blue and white cameo cut glass, mosaic glass and millefiori glass), some of which were popular in the Roman empire,[167] were noticed at Taxila. However, all the glass specimens discovered from Taxila were not essentially of foreign make. Glass objects, made locally, were also noticed here. The discovery of as many as 392 'flans' of grey coloured glass for making beads from a jewellers' shop at Sirkap[168] suggests local working in glass. A. Ghosh's excavation here also brought to light some beads and bangles made of glass.[169]

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[146] *AP*, II, pp. 121-23.

[147] Marshall, *op. cit.*, ch. XXXVII. See also *AI*, no. 4, pp. 72-4.

[148] *IAR*, 1970-71, p. 62; 1971-72, p. 42.

[149] *Ibid.*, 1970-71, p. 31.

[150] *AI*, nos. 10-11. p. 92.

[151] *IAR*, 1954-55, p. 16.

[152] B.P. Sinha and S.R. Roy, *op. cit.*, p. 188. See also Krishna Deva and V.K. Mishra, *op. cit.*, p. 61.

[153] A.S. Altekar and V.K. Mishra, *op. cit.*, p. 132.

[154] B.P. Sinha and B.S. Verma, *op. cit.*, p. 101.

[155] See the chart.

[156] M.G. Dikshit, *History of Indian Glass*, Bombay, 1967, p. 2.

[157] *Miliñda*, V. 4, p. 210. See also p. 331.

[158] *Mahāvastu*, III, pp. 112, 444.

[159] P.L. Vaidya (ed.), *Divyāvadana*, pp. 142, 438. See also *Saddharma Pundarika*, II. 84; *Saundarānanda*, IV. 13; *Ākarāṅga Sūtra*, pp. 161-7; *Manu*, V. 114, *Yajñ*, VIII. 190; *Viṣṇu*, XLV, 14, 22, LXXI, 20, 24. The *Śilāppadikāram*, II. XX. 13-23, even refers to looking glasses and metal boxes made of glass.

[160] G.L. Adhya, *op. cit.*, pp. 79-80.

[161] *AP*, II, pp. 121-22.

[162] Marshall, *op. cit.*, p. 650.

Glass bangles and beads are reported from other Kuṣāṇa sites like Hastināpur,[170] Noh,[171] Mason,[172] Kauśāmbī,[173] Bhīṭā,[174] Rājghāṭ,[175] Kumrahār,[176] Vaiśālī,[177] Sonpur,[178] Buxar and Chirand.[179] Besides, a glass factory site at Kopia, near Maidaval in the Bastī district of Uttar Pradesh, was noticed. The site belonged to *c.* 300 B.C.—A.D. 300, and has yielded a large number of glass fragments and lumps of unworked glass, fused lumps and sintered glass. Moreover, molten glass on earth platters and crude glass in various stages of manufacture were also found here in great quantity. The site belonged to Kuṣāṇa times and notably to the period of Kaniṣka.[180] All this as well as specimens from Raṅgmahal, Sambhar, Ahar, Tripuri, Maheswar, Eran and Ter,[181] suggest the existence of highly developed glass industry. Moreover, the fine colour of these glass objects and their low specific gravity suggest that the Indians had good knowledge of the chemical aspects of glass technology.[182]

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[163] Marshall, *op. cit.*, p. 684.
[164] *Ibid.*, pp. 685-89.
[165] *Ibid.*, pp. 685-90.
[166] *Ibid.*, pp. 741-42.
[167] M.G. Dikshit, *op. cit.*, pp. 28-30.
[168] *Ibid.*, p. 31.
[169] *AI*, no. 4, pp. 73, 80.
[170] *Ibid.*, nos. 10-11, pp. 90, 92-4.
[171] *IAR*, 1970-71, p. 62; 1971-72, p. 42.
[172] *Ibid.* 1964-65, p. 43.
[173] *MASI*, no. 74, pp. 93, 106.
[174] *ASI—SR*, 1911-12, pp. 29-94 (noteworthy gold-foiled bead).
[175] *IAR*, 1957-58, p. 50; 1960-61, p. 37.
[176] A.S. Altekar and V.K. Mishra, *op. cit.*, pp. 130-35.
[177] Krishna Deva and V.K. Mishra, *op. cit.*, p. 61; B.P. Sinha and S.R. Roy, *op. cit.*, pp. 174, 187.
[178] B.P. Sinha and B.S. Verma, *op. cit.*, pp. 101, 113.
[179] See the chart.
[180] M.G. Dikshit, *op. cit.*, pp. 39, 153.
[181] *Ibid.*, pp. 36-44.
[182] *AI*, no. 8, p. 17.

X. Bone and Ivory

Apart from terracotta, stone, metal and glass the working in bone and ivory also developed during Kuṣāṇa times. They were used for the manufacture of domestic objects as well as luxurious goods and weapons. Some of the important bone objects were combs, hairpins, bangles, dice, handles of mirror, furniture, decorative pieces, small boxes of ivory and arrow-heads, short daggers, harpoons and styluses. Some of these objects have been reported from the Kuṣāṇa levels of excavated sites in India.

The literary references alone suggest that bone and ivory worker's craft was well practised in the early centuries of the Christian era and describe Banaras as an important centre of ivory-workers. Numerous references to working in bone and ivory are preserved in the *Jātakas*.[183] Similarly an inscription from Sāñchī refers to ivory carvers of Vidiśā.[184]

Objects of bone, shell and ivory have been discovered from many excavated sites. The best specimens of ivory work are represented by the finds at Begram and Taxila. The excavations of a French archaeologist (1937-40) at Begram, the summer capital of the Kuṣāṇas, brought to light a large hoard of ivory objects of Indian origin. These were in the form of plaques (nearly 600 in number) depicting toilet and adornment scenes, dancing scenes and musical instruments, scenes of hunting, and representing mythical creatures, animals, birds and architectural background. The most striking feature of these plaques is the complete absence of male figures on them which may be taken to suggest that they belonged to toilet delineating private harem of the royal household.[185] These plaques, assigned to *circa* 1st-2nd centuries A.D., were perhaps manufactured in Begram itself with the help of imported ivory carvers from Mathura.

Objects of ivory, shell and bone were discovered in the north-west from Taxila and Saikhan Dheri, in north India from Rupar,[186] Noh,[187] Kurukṣetra,[188] Purānā Quilā,[189] Mason,[190] Hastināpur,[191] Kuśāmbī,[193] Bhīṭā,[193] Rājghāṭ,[194] Vaiśālī,[195]

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[183] *Jātakas*, I. 60, 72; II. 221 etc. See also *Miliñda*, V. 4, p. 210; *Mahāvastu*, II, p. 473; *Divyāvadana*, p. 410; *Buddhacarita*, I. 86; *Kāmasūtra*, III. 1. 16; *Aṅgavijjā*, pp. 15, 112, 136ff; *Manu*, V. 121; *Viṣṇu*, XXXIII. 34.

[184] *EI*, II, p. 92.

[185] N.P. Dwivedi, *Indian Ivories*, New Delhi, 1976, pp. 87-9. See also *JUPHS*, 1965, pp. 1-6; *Mārg*, XXIV, no. 3 (1971), pp. 47-54; *JIH*, LI, pt. III (1973), pp. 464-69.

[186] *IAR*, 1953-54, p. 7.

[187] *Ibid.*, 1965-66, p. 38; 1970-71, p. 62; 1971-72, p.

[188] *Ibid.*, 1970-71, p. 31.

[189] *Ibid.*, 1969-70, p. 5; 1970-71,

[190] *Ibid.*, 1964-65, p. 43; 1965-66, p. 52; 1970-71, p. 76.

[191] *AI*, nos. 10-11. pp. 90, 92.

[192] *MASI*, no. 74, pp. 93-4.

[193] *ASI—AR*, 1911-12, p. p. 34.

[194] *Annual Bibliography of Indian History and Indology*, III (1940), p. XIV, *IAR*, 1960-61, p. 37.

[195] Krishna Deva and V.K. Mishra, *op. cit.*, p. 59; B.P. Sinha and S.R. Roy, *op. cit.*, pp. 193-94, 200ff.

Kumrahār,[196] Sonpur,[197] Buxar and Chirand.[198] These finds give us some idea of the flourishing craftmanship in ivory and bone during Kuṣāṇa times.

XI. Perfume Making

Another important craft was the manufacture of perfumes of various substances. With the growth of urban culture life became luxurious and comfort loving. It led to the growth of a class of persons whose sole occupation was to prepare perfumes from flowers, roots and herbs. The literary texts of the period present a very interesting and lively picture of the citizens who used perfumes, ointments and other cosmetics with great care.

The *Jātakas* refer to the process of making perfumes. At one place we are told that the king Naggaji in the city of Taxila, while sitting on a terrace, saw a woman who had put on jewelled bracelets on each hand and was grinding perfume. At another place, a perfumer's shop is mentioned.[199] The *Lalitavistara* also speaks of incense, essence and excellent unguents.[200] The *Miliñdapanho*[201] mentions dealers of perfumes as inhabitants of towns. Both cosmetic makers (*pasadhaka*) and perfumers (*gandhika*) appear in the *Aṅgavijjā*.[202] There are many other references to perfumes and perfumers in the literary sources.[203] These references suggest that the making of perfumes like sandal paste, paints, powders, essences, etc., was a flourishing craft in the early centuries of the Christian era. Perfumes and cosmetics were very much popular among the *nāgarakas* who could afford to spend lavishly on them.

The archaeological evidence for the use of perfumes and cosmetics is supplied by the discovery of large number of antimony rods, perfume vessels, incense burners, etc. The epigraphic evidence indicates the prosperous condition of the perfumers (*gandhikas*). Some epigraphs from Mathura[204] record the gifts made by the *gandhikas*. It seems from these records that the perfumers had much money and high social status so that they could make religious endowments. It also appears that the perfumers had organized themselves into guilds (*gana*). However, it is very difficult to point out whether the *gandhikas* dealt in pharmaceutical products and indigenous herbs also.[205] Most probably they did so.

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[196] A.S. Altekar and V.K. Mishra, *op. cit.*, p. 136.

[197] B. P. Sinha and B.S. Verma. *op. cit.*, pp. 101, 113.

[198] See the chart.

[199] *Jātakas*, III. 408; IV. 454, 481; VI. 538.

[200] *Lalitavistara*, pp. 77, 134 ff.

[201] *Miliñda*, V. 4, p. 210.

[202] Motichandra. *op. cit.*, p. 47.

[203] *Mahāvastu*, III, pp. 111, 443; *Kāmasūtra*, III. 1.16; *Saundarānanda*, IV. 13, 16, 26, 38ff; *Manu*, II. 177; X. 85-9; *Viṣṇu*, III. 25; LII. 13, 18; LXXXVI. 18.

[204] *EI*, I, no. 7, p. 385; II, no. 16, p. 202; *IA*, XXXIII, no. 21, p. 107 and no. 23, p. 23.

[205] *IC*, XII, no. 1, p. 84.

XII. Liquor and Oil Manufacturers

Liquor and oil industry also thrived during the period. There emerged a professional class which subsisted by preparing soft and strong drinks and oils of different use. From literary references it is evident that liquors and oil had become the commodities of common consumption. Different types of drinks and oil shops where they were sold and the persons employed in them are noticed in literature. The Vedic *śoma* continued to be used, but some new varieties also seem to have been in use during Kuṣāṇa times.

The *Jātakas* tell us about the use of liquors, liquor-shops and apprentices employed by tavern keepers. Festive occasions and parties were marked by drinks.[206] Several Buddhist texts are replete with references to liquor and oil.[207] The *Ākarāṅga Sūtra* and the *Aṅgavijjā* contain interesting lists of fruit juices, drinks and oils.[208] The *Kāmasūtra* also speaks of the art of preparing sharbats and drinks.[209] Various kinds of liquor, oil and their dealers are mentioned in the lawbooks.[210] All this implies prosperity of liquor and oil industry. The town life which became luxurious on account of wealth, public women, dance, song, music, perfumes, etc., supported the liquor industry. Drinking became almost a fashion, enjoyed by both men and women, at least in the upper strata of society. This is quite clear from the drinking scenes noticed in the Gandhara art.[211]

XIII. Leather Industry

References to leather industry are also preserved in the contemporary literature. Leather must have been used for various household purposes. The *Jātakas* refer to leather jerkins, big leather sacks, ropes, straps and parachutes made of leather. A cobbler is referred to as making shoes.[212] It appears from the *Jātakas* that leather garments were used as a protection against cold and leather sacks might have been used for transporting merchandise, as they were light and more durable than other types of containers. However, the use of parachutes is not clear. Leather was used in the construction of musical instruments also. Other references also suggest the similar use of leather.[213]

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[206] *Jātakas*, I. 47, 81, 127; II. 289; V. 512; VI. 543.

[207] *Lalitavistara*, VIII, p. 134; *Miliñda*, V. 4, p. 210; *Saddharma Pundarika*, XXI. 3; *Mahāvastu*, III, pp. 112, 443; *Saundarānanda*, IV. 11ff.

[208] *Ākarāṅga Sūtra*, II. 1.8; *Aṅgavijjā*, p. 64. See also V.S. Agrawala, *op. cit.*, pp. 82-84.

[209] III. 1. 16.

[210] *Manu*, III. 180; IV. 84-5ff. *Yajñ*, III. 48; *Viṣṇu*, V. 83, 100; XII. 82-4 ff. See also *Śilāppadikāram*, I. V. 24-39 and I. VI. 76-98, where wine sellers, oil mongers, perfumed oil prepared by mixing up ten kinds of astringents, five spices and thirty-two herbs soaked in water, are mentioned.

[211] B.N, Puri, *op. cit.*, pp. 95-7.

[212] *Jātakas*, III. 324, 336; V. 514 and VI. 538.

[213] *Miliñda*, V. 4, p. 210; *Mahāvastu*, III, p. 113 (*carmakara*), 444; Motichandra, *op. cit.*, p. 38; J.C. Jain, *op. cit.*, p. 103; *Śilāppadikāram*, I. V. 76-88; II. XIV. 146-67ff; *Manu*, VIII, 289; X. 49; *Yajñ*, VIII. 82-3; *Viṣṇu*, VI. 16; LI. 8, ff.

XIV. *Miscellaneous Occupations and Crafts*

The contemporary literature mentions several other professions and crafts. Some of these were garland makers, bow, comb and basket makers, ferrymen and boatmen, jewellers, betel-leaf sellers, drivers of carts and charioteers, *sārthavāhas* vendors of prepared food, butchers, fowlers, corpse burners, fishermen, etc. The Kuṣāṇa inscriptions also suggest the existence of engineers or architects[214] and well-diggers.[215] It seems that persons connected with almost all the aspects of human life earned their livelihood in towns.

An important feature of the urban economy, as noticed from the lawbooks of the period, is that most of the artisans and craftsmen belonged to the lower strata of the *varṇa* ridden society. While prescribing the duties of various castes, Manu explicitly maintains that vaiśyas may follow a śudra's mode of life and the śudra may maintain himself by handicrafts. Although the brahmanas could follow the occupation of the vaiśyas only in case of great distress, they were not to trade in condiments, cooked food and sesamum, stones, salt, cattle and human beings; dyed cloth, cloth made of hemp, flex or wool, fruit, roots, medicinal herbs, water, weapons, poison, *śoma*, perfumes, fresh milk, honey, clarified butter, oil, sugar, etc. Similarly, a kṣatriya could resort to these means of livelihood, but he could never arrogantly adopt the mode of life prescribed for the brahmanas. Only in case of dire distress Manu permits ten means of subsistence, which include arts and crafts, to the persons of all varṇas.[216]

Moreover it appears from Manu that some of the mixed castes pursued important crafts. Thus we are told that the *ayogaya* practised wood work, the *dhigvana* and the *karavara* worked in leather. The *paṇḍusopaka* worked in canes. The *margava* or the *dasa* subsisted by working as boatman. The *venas* played on drums and the *sairandhra* was skilled in adoring and attending on his master. The *maitreyaka* rang bell at the appearance of dawn and praised greatmen. Most of these mixed castes were untouchables and they lived outside brahmanic settlements.[217]

We have no means to ascertain how far these scriptural regulations were in force. But it is quite possible that with the advent of the foreigners like the Greeks, Sakas, Parthians and Kuṣāṇas, the consequent displacement of existing populations, establishment of new settlements and increased mobility, might have loosened the shackles of the varṇa system.[218]

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[214] *The British Museum Quarterly*, XXVIII (1964), pp. 39-46 (*navakarmika*-Superintendent of constructions).

[215] *EI*, XIX, pp. 1ff; *CII*, II, pt. I; p. 155ff; *EI*, XIV, pp. 130ff; *ASI—AR*, 1911-12, p. 124. Although the well-diggers are not mentioned in these records, the digging of wells, referred to in these inscriptions, presupposes a class of well-diggers.

[216] *Manu*, X. 81-116. Cf. *Viṣṇu*, II. 10-4.

[217] R.S. Sharma, *Śūdras in Ancient India*, Motilal Banarsidass. 1958, pp. 206-7.

[218] *Ibid.*, p. 219.

Another important feature of the period seems to be considerable increase in the number of artisans and crafts.[219] Their number is far greater than those noticed in the *Arthaśāstra*. The increase in the number of artisans like potters, smiths or weavers led to greater specialization—a process which was also accelerated by the constantly growing demand of articles produced by them. Specialization of crafts further resulted in the localization of industries. From literary and epigraphic evidence it appears that Taxila, Mathurā and Banaras flourished as industrial centres in northern India during this period.

Generally artisans and craftsmen worked as individual entrepreneurs and were not attached to their clientele in the way the *dāsas* and the *karmakāras* served their masters.[220] Side by side, joint enterprise of crafts also existed during this period. Although the guilds of artisans and craftsmen are seldom mentioned in the Kuṣāṇa inscriptions,[221] epigraphic evidence from western India and the lawbooks suggests the existence of a large number of such guilds. In fact, the importnace and powers of the guilds had increased so enormously that the lawbooks asked the king to respect and maintain guild regulations,[222] protect guild property.[223] Provisions were also made to regulate business relations between the producer and the customer. The guilds on their part looked after the interests of their members and acted as trusts and bankers. Some of the guilds also issued their seals. Such a seal was discovered from Basarh (Vaiśālī), assigned to the 3rd century A.D.[224] In fact the guilds acted as a stimulus to the growth of crafts and industries during the early centuries of the Christian era.

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219. Whereas the *Jātakas*, *Pamnavana Sūtra* and the *Digha Nikaya* mention only 18 and 24 kinds of guilds, the *Mahāvastu* and the *Miliñdapanho* refer to as many as 36 and 74 types of artisans and crafts.
220. R.S. Sharma, *op. cit.*, p. 181.
221. *EI*, XXI, pp. 55ff.
222. *Manu*, VIII. 41; *Yājñ* . II. 192.
223. *Ibid.*, VIII. 219: II. 187 and *Viṣṇu*, V. 167.
224. *ASI—AR*, 1903-4, pp. 101ff.

Table indicating the finds from the Kuṣāṇa layers at Chirand till May 1971 (other than terracottas and pottery) Total antiquities 2263

Objects	Copper	Iron	Glass	Agate	Jasper	Basalt	Slate	Chalcidony	Quartz	Ivory	Shell	Bone	Stone	Crystal	Carnellian	Coral	Soap stone	Amethyst	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Antimony rods	32	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	33
2. Bangles	2	—	10	—	—	—	—	—	—	—	1	1	2	—	—	—	—	Unknown metal	17
3. Beads	2	—	29	10	7	2	—	6	—	6	—	3	42	6	11	1	1	1	145
4. Piece	7	22	2	—	—	—	—	—	—	—	—	1	5	—	—	—	—	—	37
5. Deer Horn	—	—	—	—	—	—	—	—	—	—	—	7	—	—	—	—	—	—	7
6. Stylus	—	—	—	—	—	—	—	—	—	3	—	33	—	—	—	—	—	—	36
7. Bone of Crocodile	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
8. Mother Pearl	—	—	—	—	—	—	—	—	—	—	—	—	Delicate stone 1	—	—	—	—	—	1
9. Arrow Heads	—	1	—	—	—	—	—	—	—	3	—	56	—	—	—	—	—	—	60
10. Quern and Pestle	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	2
11. Iron lug	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
12. Chholani	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
13. Sword	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1

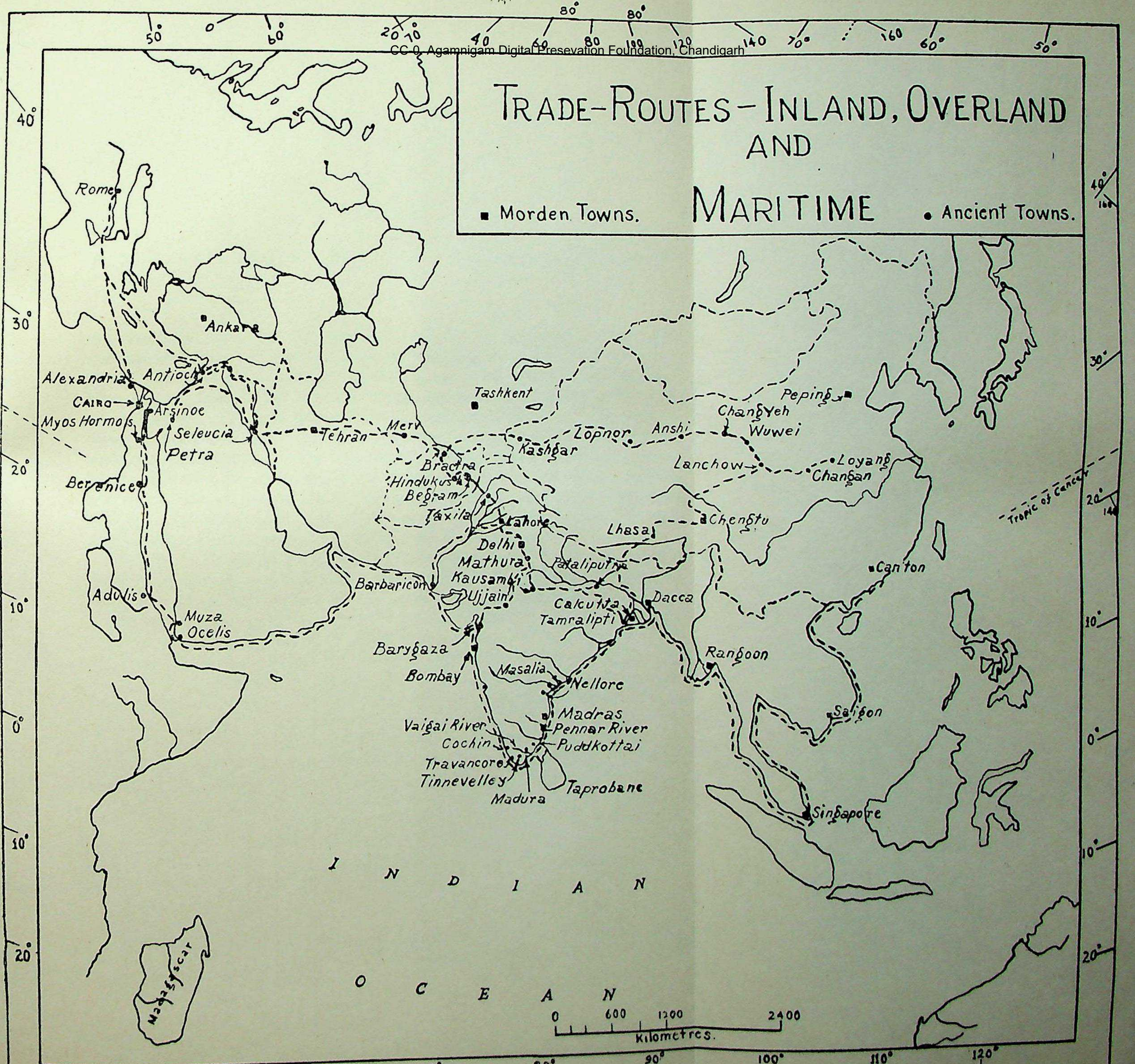
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
14. Stin	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
15. Earlobe	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
16. Ear-ring	—	—	—	—	—	—	—	—	—	—	—	—	6	—	—	—	2	—	8
17. Dice	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	2
18. Pin	—	—	—	—	—	—	—	—	—	3	—	15	—	—	—	—	—	—	18
19. Weight	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	4
20. Wheal	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	2
21. Wire	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
22. Ring	1	1	2	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	6
23. Pot	2	2	—	1	—	—	—	—	—	—	—	1	5	—	—	—	—	—	11
24. Blade	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
25. Nail	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
26. Nut-cutter	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
27. Knife	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
28. Coins	Copper																		

This chart has been prepared on the basis of antiquities register maintained in the Office of Directorate of Archaeology, Museum, Patna which was made available to me by Shri L.A. Narain Conservation Officer of the Directorate.

Table indicating the finds from the Kuṣāṇa Layers at Buxar (1964-66) other than pottery and terracottas

Objects	*Copper*	*Iron*	*Glass*	*Stone*	*Ivory*	*Bone*	*Total*
Beads	—	—	1	20	—	1	22
Unspecified copper objects	1	—	—	—	—	—	1
Pieces	—	8	—	—	—	—	8
Hook	—	1	—	—	—	—	1
Bangle	—	—	2	—	1	—	3
Stylus	—	—	—	—	—	3	3
Total	1	9	3	20	1	4	38

This chart has been prepared on the basis of antiquities register maintained in the Office of the Directorate of Archaeology and Museums, Government of Bihar, Patna, made available to me by Shri Lala Aditya Narain, Conservation Officer of the Directorate.



TRADE-ROUTES-INLAND, OVERLAND AND MARITIME

■ Morden Towns. ● Ancient Towns.

Rome
Ankara
Alexandria
Antioch
CAIRO
Arsinoe
Myos Hormos
Seleucia
Petra
Berenice
Adulis
Muza
Ocelis
Tehran
Merv
Tashkent
Bractra
Hindukush
Begram
Taxila
Lahore
Kashgar
Lopnor
Anshi
Changyeh
Wuwei
Peping
Lanchow
Loyang
Changan
Chengtu
Lhasa
Delhi
Mathura
Kausambi
Pataliputra
Barbaricon
Ujjain
Calcutta
Tamralipti
Dacca
Canton
Barygaza
Bombay
Masalia
Nellore
Rangoon
Madras
Pennar River
Vaigai River
Cochin
Puddkottai
Travancore
Tinnevelley
Madura
Taprobane
Saigon
Singapore
Tropic of Cancer
Madagascar
INDIAN OCEAN
0 600 1200 2400
Kilometres.
40°
30°
20°
10°
0°
10°
20°
50
60
70
80
90°
100°
110°
120°
140
160

CHAPTER FIVE

TRADE AND TRADE ROUTES IN THE KUṢĀṆA PERIOD

THE EARLY centuries of the Christian era constitute a period of thriving trade and commerce, both internal and foreign. Trade was the cause as well as the effect of the unprecedented growth in the number of towns, which apart from being administrative, religious and industrial centres, also flourished as marts. Almost all important towns in India were connected with each other, either through land or water channels and some of them were even in direct connection with foreign trade routes and trading centres. Thus the entire Indian peninsula formed a single unit, at least from the commercial point of view. Overland and sea routes stimulated the growth of foreign trade, especially with the Roman empire. The Indian literature, the Greek and Latin travel accounts and archaeological evidence bear testimony to India's thriving commerce with the western world.

The Buddhist and Jain literatures provide evidence of the commercial activities of the Indian traders. The Pālī *Jātakas*, though somewhat earlier in date (5th-2nd centuries B.C.), are replete with references to merchants moving from one place to another in caravans and the customary number of 500 carts loaded with merchandise. Banaras and Śrāvastī appear as important trading centres in the *Jātakas*. We often learn about the merchants travelling from east to west and west to east. Horses from north brought to Banaras for sale are mentioned. Sea voyage and foreign trade are alluded to. Thus the *Cullaka-Seṭhī*, *Dadhī-Vāhana*, *Bāveru*, *Sussondī*, *Suppāraka*, *Samudda-vaṇija*, *Paṇḍāra*, *Muga-Pakha* and several other *Jātakas* speak of ships in oceans, merchants and the perils faced by them in sea voyages. It is interesting to note in this connection that Bhārukacha (Broach), Bāveru (Babylon), Suvarṇadvipa (Golden island) and other places are mentioned in these stories in connection with the maritime activities.[1] However, apart from mentioning the fabulous wealth of the merchants and some stray references to merchandise, the *Jātakas* on the whole do not enlighten us on the items of trade or the mode of sale and purchase. Nor do they tell us about the rules and regulations which guided the merchants and the taxes levied on merchandise.

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[1] For references on trade by land and water routes, see E. B. Cowell (trans. & ed.), *Jātakas*, I, no. 1, 2, 4, 29, 44, 54, 73, 90, 98; II, 158, 186, 218, 254; III, 337, 339, 340, 360, 438; IV, 463, 493; V, 518, 537; VI; 538, 540, etc.

Other Buddhist works like the *Miliñdapanho*, *Mahāvastu*, *Divyāvadana* and the *Avadānaśataka*, all composed in the first four centuries of the Christian era, give some idea of the merchants and their activities. In the *Miliñdapanho*, Sāgala is mentioned as a great centre of trade (*nānā-puṭabhednam*).[2] The text describes in detail shops full of merchandise, dealing in Banaras muslin, *koṭumbara* stuffs, clothes of different kinds, flowers and perfumes, jewels and similar other articles. It also mentions merchant guilds, displaying their merchandise in markets. It is said that the city of Sāgala was so flooded with money, gold, silver, copper and stone wares that it resembled a dazzling mine of treasure.[3] It appears from the description of the city Sāgala that people from far off places like Scythia, Bactria, China and Vilāta, Ujjaini, Bharukacha, Banaras, Kosala and other border lands, Magadha, Pāṭaliputra, Sāketa, Suratha and the west, from Koṭumbara and Madhurā, Alexandria, Kashmir and Gāndhāra came and resided there.[4] Evidently these people must have come to this city with the intention of trade because it commanded the land route connecting India with the west. On account of its advantageous position the city of Sāgala attracted merchants not only from all over India but also from foreign lands.

But by far the best evidence on trade is supplied by the *Avadānas*, the *Mahāvastu*, the *Avadānaśataka*, and the *Divyāvadana*, all of which had been compiled by the end of the 4th century A.D. The *Mahāvastu* refers to Kapilavastu as "a favourite resort of merchants and the centre of busy trade" and to the community of tradesmen with their president as their head (*sreṣthipramukho vaṇiggaramo*) at Rajagriha. It also preserves the story of Dharmalabdha who, after voyaging the ocean thrice, was consecrated as the king of Banaras.[5] These texts also refer to merchants who traded by land route and were called *sārthavāha*[6] as well as to those interested in maritime commerce and known as the *sārthavāha mahā samūdrivatirṇa*.[7] Besides, there are in these works several references to the perils in journey, the fear of robbers and pirates and other problems faced by the merchants. They moved generally in caravans under the leadership of the *sārthavāha*. The services of *nāvikas* were fruitfully utilized by the maritime traders. However, like the *Jātakas*, the *Avadānas* are generally reticent about the commodities of sale and purchase.

The evidence culled from the Jaina canons suggests that brisk trade was carried on by land as well as water routes. Ānandapura, Mathurā and Dassanapura are mentioned as *thalapaṭṭna* whereas Deva, Kanandeva and Purima find mention as *jalapaṭṭana* in it. Moreover, Bhāruyakaccha and Tamaliṭṭi are placed in the category of *doṇamuha*, suggesting that from these places trade was carried both by land and water routes. Campā, Mithilā, Ujjeni, Mathurā, Soparya and Surattha are referred to as important trading centres. We also learn from the Jaina canons about the items of import and export, means of transportation, the system of transaction, rules regarding weights and measures.[8] One of the reasons for the elaborate treatment given to trade and trade regulations in the Jaina works was apparently the fact that the Jainas were primarily concerned with trade.

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[2] T.W. Rhys Davids (trans.), *The Questions of King Miliñda*, SBE, XXV-XXVI, p. 2.
[3] *Ibid.*, p. 3.
[4] *Ibid.*, pp. 27, 211.
[5] J.J. Jones (trans.), *op. cit.*, I; p. 97; II, p. 162; III, p. 110 ff.
[6] *Ibid.*, p. 131; P.L. Vaidya (ed.), *op. cit.*, p. 23 ff.
[7] J.S. Speyer (ed.), *Avadānaśataka*, XXIII, p. 129.

The brāhmaṇical legal texts also contain trade regulations. The *Manusmṛti* provides regulations regarding the sale without ownership, recession of sale and purchase, adulteration of commodities and so on. Similar regulations also occur in the lawbooks of Yājñavalkya and Viṣṇu.

Trade, especially with foreign countries, is a recurrent theme in the Sangam literature, compiled in the first four centuries of the Christian era. Thus the *yavanas* are frequently mentioned in the Tamil literature which may imply that their presence in South India was a common feature. The *Siluppadikāram*, which contains valuable information on crafts, occupations, inland and foreign trade and town life of the Tamils during the early centuries of the Christian era, vividly describes the wealth of the merchants of the city of Puhār (Kāverīpaṭṭanam), were houses near the harbours and the abode of the *yavanas*. Streets of shop-keepers dealing in different kinds of merchandise are also noticed.[9] The early Tamil literature provides many similar references to the flourishing maritime trade of South India with foreign countries.

More clear and consolidated evidence bearing on India's foreign trade in the early centuries of the Christian era is found in the works of the classical Graeco-Roman writers, some of whom visited India. Thus the *Periplus of the Erythraean Sea* (A.D. 60),[10] the *Natural History* of Pliny (A.D. 77),[11] Ptolemy's *Geography* (middle of the 2nd century A.D.)[12] and the *Geography* of Strabo,[13] throw valuable light on the ports and towns of western and southern India, the items of export and import, the

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8. J.C. Jain, *op. cit.*, pp. 113-22.
9. V.R.R. Dikshitar (trans.), *The Silappadikāram*, OUP, 1939, Bk. I. I. 1-11; I. V. 7-39. The best account of the richness of the city of *Puhār*, apparently on account of commercial intercourse with the western world is preserved thus: 'In these stretches of white sand can be seen different kinds of goods brought in ships by foreign merchants who have left their native houses and settled here. There were burning the lamps of those who sold dyes, sandals, flowers, scents and all varieties of sweets, the lamps of dexterous goldsmiths, the lamps of those who, sitting in a row, sold *piṭṭu*, the black broad lamps placed on lamp-stands by the sellers of muffins, the lamps in front of the miscellaneous shops of girl-vendors, the lamps of fishmongers glimmering here and there, beacon-lights erected to guide ships on the sea-shore, lamps taken out to sea by fishermen in their boats as they went afishing with nets, night long lights set up by foreigners speaking different languages and finally the lamps lit by the watchmen of (the warehouses containing) valuable merchandise. *Ibid.*, I. VI. 128-44.
10. W.H. Schoff, *op. cit.*, p. 15.
11. J.W. McCrindle, *Ancient India As Described in Classical Literature*, Amsterdam, 1971 (Reprint), p. 102.
12. R.C. Majumdar, *Classical Accounts of India*, Calcutta, 1960, p. 351.
13. This work was revised finally between A.D. 17 and 23. *Ibid.*, p. 93

embassies sent to the western world as well as the routes followed by the merchants and the sailors. The details given in these works are corroborated by Indian literature and archaeological material. The discovery of the Roman coins and Mediterranean potsherds in India and the ivory statuette of *Lakṣmi*, the Indian goddess of wealth, found in Pompeii (Italy), are some of the examples which attest India's trade with the Roman world. Moreover, some sculptures, paintings and coins, bearing the figures of ships and boats,[14] words *vaṇika*,[15] *seṭṭhi*,[16] *sārthavāha*[17] occurring in Kuṣāṇa inscriptions, and reference to people from Abhisara, Uddiyana, Nagara (Nagarahara) and Wakhan or Bakan[18] in the Kuṣāṇa inscriptions from Mathurā unmistakably prove trading activities and Mathurā's link with far off places. It may also be pointed out that some inscriptions discovered from Nasik, Junnar and Karle record the dedication of the *yavanas*,[19] who must have visited those places while they came to India for the purpose of trade, otherwise there seems to be no sense in the coming of the *yavanas* to a country situated at a great distance from their own land. This hypothesis seems to be more plausible in the light of the fact that journey in those days was full of obstacles and dangers.

Thus both literary and archaeological sources indicate India's flourishing trade during the early centuries of the Christian era. However, the Indian sources, as compared to the Greek and Latin, are deficient in many ways. There is hardly any indigenous work which discusses elaborately the trade routes, important ports and trading centres and the articles of trade. This lacuna is on account of the fact that the Indian literature of the period under discussion was religious in nature and mainly speaks of the merchant community which made large number of donations to different religious orders. In fact there is no Indian literary work comparable to the *Periplus* or the *Natural History* or Ptolemy's *Geography*.

Nevertheless, the available data give a fair idea about the commercial activities of the Indian merchants. It appears that the merchants traversed the whole of India from north to south and east to west and even traded with the Roman world in the west and the Chinese empire in the east. They carried on business with the central Asian and the Chinese peoples through land routes and with the Mediterranean world through water routes.

The political condition of India during the early centuries of the Christian era worked as a stimulus to the growth of trade. The unification of almost the whole northern India under the Kuṣāṇas brought about peace in the land and provided a congenial atmosphere for the growth of trade. They controlled the Indus and the

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[14] R.K Mookerjee, *Indian Shipping*, Delhi, 1962 (Reprint), pp. 23-36.

[15] *JUPHS*, 1939 (July), no. XIV, p. 24.

[16] *EI*, I, no. 1, p. 381.

[17] *Ibid.*, XIX, no. 3, p. 66.

[18] K.L. Janert (ed.), *Mathura Inscriptions*, Gottingen, 1961, pp. 38-39, no. 13; 68, no. 31; 113, no. 78 and 134-35, no. 98.

[19] R.E.M. Wheeler, *Rome Beyond the Imperial Frontiers*, Penguin Book, 1955, p. 159.

Gangetic basins through which inland trade was carried on.[20] More advantageous from the commercial point of view, however, was the Silk Route, which passed through the Kuṣāṇa dominions of central Asia and connected it with China and the west Asian provinces of the Roman empire. It was through this route that bulk of the Chinese silk passed on to the Roman world, and the Kuṣāṇas might have extracted much money from the caravans passing through this route. The prosperity of Kuṣāṇa towns in the Indian sub-continent and central Asia seems to have owed a great deal to the profit gained from this trade.

Another important factor which helped considerably the growth of trade was the use of coined money on an unprecedented scale during the period, especially in north-western India. The credit for this goes to the Kuṣāṇas who issued a large number of gold coins for the first time in India.

Similarly in the western and southern India two important dynasties rose to power, the Sakas of the western India and the Sātavāhanas in the Deccan. The Sakas controlled western Malwa and the Saurāṣtra region and the Sātavāhanas held sway over Karnataka and Andhra regions. These areas were extremely important from the commercial point of view. It was in these areas that commercial towns like Ujjaini, Tagara, Paithan, Broach, Sopara, Arikamedu, Kaveripattanam, etc., were situated, commanding both inland and foreign trade routes. Thus the control of the important commercial centres and trade routes by three important contemporary powers brought about the commercial unification of India. The western India and the Deccan controlled the sea routes and traded profitably, while north-western India carried on trade through the Silk Route.

I. *Internal Trade*

The Indian literature and to some extent the archaeological material help us in giving an outline of inland trade of India during the early centuries of the Christian era. The terms *vaṇika, sārthavāha* and *seṭṭhi* noticed in the Kuṣāṇa inscriptions imply that there were different classes of merchants. The word *vaṇika* (modern *baniyā*) was probably used for those petty merchants who were interested in their shops, situated in a market or wherever there was possibility of sale. The *seṭṭhis* (modern *seṭh*) had greater interests in trade and they may be compared to the wholesale dealers of modern times. They carried on trade with the help of many assistants and amassed great wealth and enjoyed privilege and prestige in the society. The *sārthavāhas* were a different class of merchants who moved from one place to another selling and purchasing merchandise. They generally moved in groups (*sārtha*) and their leader was known as *sārthavāha*. Besides, there appears to be another class of persons engaged in trade, the howkers. They were generally employed by *seṭṭhis* who sold wares in streets or houses on behalf of their masters. The literature of the period mentions many hawkers who roamed in markets, telling the people about the qualities of their goods and selling them to those who needed them.[21] But the hawkers also worked independently. Moreover we learn from the *Jātakas* that the shop-keepers also employed apprentices in their shops.[22]

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[20] The ports of the lower Indus valley offered the merchants of north-western India an opportunity for quickest transhipment of the merchandise, as the commercial centres situated in the region were connected not only with the different parts of India but also with central Asia. See B.N. Mukherjee, *The Economic Factors in Kuṣāṇa History*, Calcutta, 1970, pp. 15-16

Another class of merchants was apparently of those who took interest in riverine and oceanic trade. The difficulties and dangers of land routes in those days compelled many merchants to prefer water routes which were comparatively less infested by robbers and were easier to sail, and through which merchandise could be transported quickly. It was also due to the fact that important towns of the period were situated either on river banks or in the proximity of water routes. Reference to several kinds of boats and persons connected with ferry suggests a regular trade maintained through waterways. There are many references in the contemporary literature of the period to sea-faring merchants, but it is difficult to ascertain from them whether they refer entirely to the foreign maritime activity or to the internal trade as well. We may presume that in some cases these references may indicate the internal riverine trade also. From the *Aṅgavijjā*, we know about boatmen (*nāvikas*), the officer-in-charge of ferry charge (*tarapaatta*), warden of the river crossings (*titthapala*) and the admiral (*navadhigata*).[23] The services of the *nāvikas* were utilised by merchants who sailed ships or ferried boats efficiently in water. On the basis of the *Mugha-Pakkha Jātaka*, we may suppose that the sailors used some mechanical device like compass to find out right direction in water.[24]

Although different classes of merchants are mentioned in literature, there is no way to examine their relative status. The literary texts often refer to the great wealth of the seṭṭhis. The sea-faring merchants also must have acquired similar or more wealth, but the *vaṇikas* and hawkers seem to be economically inferior to other merchants.

Some idea of the items of trade may be formed on the basis of literary references. Some of the texts, mentioned earlier, refer to sellers of various commodities. Even where such persons are not mentioned the long list of articles, ranging from pottery to precious stones and gold, suggests their sale and purchase. These articles may be divided into two categories: (a) perishable commodities having limited market, e.g., vegetables, fruits, flowers, prepared food, fresh fish and meat, mutton and similar other objects, and (b) such articles as were comparatively more durable, could be stored for a longer period and had wide range of circulation like animals, cloth, wine, grain, metal wares, ivory products, jewels, precious stones, salt, spices, etc.

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[21] *Milinda*, p. 210; *Mahāvastu*, III, p. 112; *Silappadikāram*, I. V. 7-23.
[22] *Jātaka*, I. 47.
[23] Motichandra, "Introduction to Aṅgavijjā", p. 47.
[24] *Jātaka*, VI, 538.

The first category comprised green vegetables,[25] floweres and garlands,[26] readymade articles of food like boiled rice, cakes and *khāja* sweet,[27] mutton, fish and dried fish, oil cakes, oil, ghee, cow-milk, curd,[28] and betel-leaves.[29] Similarly *kandu* (some kind of eatable), bark, shrubs, twings,[30] skin, canes, chaff, bees-wax[31] can also be listed in this class of merchandise. However, this list is not exhaustive and many other items may be placed in the category of perishable commodities.

The merchandise coming in the second category are rather more important because of their greater demand, wider range of circulation and their durability. Of these, some were of the nature of essential commodities while others may be included in the items of luxury, though it is often difficult to draw a demarcating line between them. The essential items included grains, pots and pans, salt and vinegar, cloth, cloaks, wood, etc. Grain was one of the most important articles exported from surplus areas. The *Silappadikāram*, which may reflect the trading condition in South India, refers to the streets of grain-dealers who kept their grains in separate heaps.[32] Corn-dealers are noticed elsewhere also,[33] but these references do not mention the kind of grains sold in markets. However, we may presume that wheat, barley, rice, etc., must have been sold in markets.

Of other kinds of merchandise mentioned in the literary writings cloth seems to be very important. They often mention cloth, made of cotton, silk or fur, hemp and linen. It appears from these references that at Banaras very fine quality of cloth, known as *kāsi* cloth was manufactured and sent to various parts of the country.[33a] A special kind of cloth called *sataka*, prepared in Mathurā, is mentioned by Patanjali.[34] The *Aṅgavijjā* includes dealer in yarn (*suttavaṇika*) and cloth-dealer (*dussika*)[35] in its list of professions.

Another article of common use was salt, prepared either from sea water or procured from hills. The evidence of trade in salt is provided by the *Jātakas*,[36] the *Aṅgavijjā*[37] and the *Silappadikāram*.[38] Salt as an article of trade is also mentioned by Manu who prohibits the participation of the brāhmaṇas in its trade.[39]

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[25] *Jātaka* I. 102; Motichandra, *op. cit.*, p. 47 (paṇṇaka).

[26] *Milinda*, p. 3; *Viṣṇu*, LII. 18; *Silappadikāram* I. V. 7-23; 128-44.

[27] *Milinda*, p. 210; Motichandra, *op. cit.*, p. 47.

[28] *Silappadikāram*, I. V. 24-39; VII. 10; *Manu* III. 152.

[29] *Viṣṇu*, LII. 18.

[30] *Silappadikāram*, I. V. 24-39.

[31] *Viṣṇu*, LII. 18-19.

[32] The text also describes the streets of corn-chandlers where merchants were moving with balances, measuring-vessels (*parai*) and grain measures (*ambanam*) and where sacks filled with grain and pepper were kept. *Ibid.*, I. V. 24-39 and II. XIV. 205-18.

[33] *Jātakas* III. 365; *Milinda*. p. 3.

[33a] *Jātaka*, VI. 542; *Milinda*, p. 3; *Mahāvastu*, I, pp. 191, 255, etc.

[34] Cited in R.S. Sharma, *Light on Early Indian Society and Economy*, Bombay, 1966, p. 75.

[35] Motichandra, *op. cit.*, p. 47.

[36] *Jātaka*, III. 337.

[37] Motichandra, *op. cit.*, p. 47.

[38] *Silappadikāram*, I. V. 24-39.

The important articles which formed the class of luxury goods, were wines of various kinds, perfumes, objects made of costly metals, ivory, precious stones and musical instruments. Of these, wine seems to be much in demand. Wine-sellers are noticed in many literary works. Manu explicitly mentions the seller of *śoma* and refers to three kinds of *sūrā*, distilled from molasses, rice and *madhūka* flowers.[40] Viṣṇu, however, refers to ten types of liquors.[41]

Next to wine, mention may be made of perfumes and unguents. Several kinds of perfumes, perfumers' shops and dealers in perfumes find mention in the contemporary literature.[42] These works refer to perfumes made of *kesara*, ointment of aloe, sandalwood, black-gum and the *tāmala* leaf,[43] *kaṣturi*, frankincense, bathing powders and cool pastes, incense and fragrant scents,[44] bdellium (*guggula*), resin of *vatica robusta* (*saijjalasa*), oil of sandalwood (*chandanarasa*), olebanum (*telavannika*), mango oil *sahakara-rasa*), lemon oil (*matulinga-rasa*) and oil of *sala* fruit (*salaphala-rasa*).[45] Besides, traders also seem to have dealt in many other scents prepared out of different kinds of flowers, fragrant juices and articles of toilet. The word *gandhika*, noticed in some of the Kuṣāṇa inscriptions, may imply the manufacturer as well as seller of prefumes (*gandhas*).

Another important item of trade seems to have been horse, the use of which was popularized by the Kuṣāṇas. Horses might have been used in trade as pack animals and for drawing carts. Even in modern times the use of horse as a pack animal may be noticed in many parts of the country. Horse-dealers and horses from Sindh are noticed in the *Jātakas*. There is also a reference to horse-dealers coming from the northern country to sell their horses at Banaras.[46] In the *Mahāvastu* we notice that traders from Taxila came to Banaras to sell their horses. The horses of Combodia and Sindh are also mentioned in this text.[47]

From the *Silappadikāram* it appears that there were shops of giri vendors in the city of *Puhar*.[48] This is quite in conformity with the classical accounts which suggest the import of singing girls in India, to be kept or employed in harems. But it is difficult to point out whether trade in human beings was practised in India. However, from several literary references to large number of slaves employed in royal households, we may infer that either they were imported from foreign

[39] *Manu*, X. 85-99; *Viṣṇu*, V. 83.

[40] *Ibid.*, III. 180; XI. 95.

[41] *Viṣṇu*, XXII. 82-4. Wine sellers are noticed in the *Jātakas*, I. 47; II. 289; V. 512; *Milinda*, p. 210; *Mahāyastu*, III, p. 112; and the *Silappadikāram*, I. V. 24-39 also.

[42] *Jātaka*, IV. 454; *Milinda*, p. 210; *Mahāvastu*, I, p. 32; *Manu*, X. 85-k9; *Viṣṇu*, LII. 18; *Silappadikāram*, I. II. 62-72; V. 128-44, etc.

[43] *Mahāvastu*, I, pp. 14, 32, 112ff.

[44] *Silappadikāram*, I. II. 62-72; V. 7-23ff.

[45] Motichandra, *op. cit.*, p. 55.

Jātakas, I. 4, 5; II. 158, 254, VI. 538.

[47] *Mahāvastu*, II, pp. 162, 179.

[48] *Silappadikāram*, I. V. 128-44.

countries, about which the classical authors speak, or were bonded labourers. But there is nothing to suggest the internal trade in human beings.

Other items of trade included pottery, terracotta, toy-carts, pots, metal wares, semi-precious and precious stones, costly jewels and jewellery, ivory and ivory-works, and such other manufactured goods as have been referred to in the precious chapter and exhumed from the Kuṣāṇa sites in India. The discovery of pottery of similar type and fabric, metal, ivory and glass objects, discovered from the Kuṣāṇa horizons in northern, western and southern sites, may be taken to suggest some kind of trade in these articles or in raw materials out of which they were produced. For example, beads of semi-precious stones have been discovered from almost all the excavated sites in India, but they are not found in the form of raw-material everywhere.[49] Their occurrence simply indicates that semi-precious stones, either in unfinished form or in the shape of manufactured beads, were sent to various parts of the country. The same generalization may be made about ivory, glass and other metals.

Similarly, statues of stone, carved in Mathurā style, must have been sent to other places for sale. This becomes clear from the statue of an inscribed Buddha discovered from Srāvasti. Although the inscription makes no reference to Mathurā, it records "the pious gift of Sihadeva, a Pravārika of Sāketa", and the sculpture resembles very much the style of Mathurā Buddha. Marshall, on the basis of another similar statue in the Mathurā Museum, suggests that both of these sculptures were the work of the same artist.[50] The fact that a *Pravārika* of Sāketa (Ayodhya)[51] came to Srāvasti and dedicated a statue of the Buddha may imply that he must have come there in connection with trade and performed the gift of a statue at Srāvasti which still flourished as a Buddhist centre. We may suppose, therefore, that sometimes art pieces also formed an article of trade. The discovery of ivory objects in Mathurā style at Begram and Pompeli also points to the same direction. Another archaeological evidence for trade is supplied by some Kuṣāṇa inscriptions from Mathurā which record the gifts of cotton-dealer (*karppāsika*) and the timber merchant (*kasṭikiya*).[52]

The medium of exchange for trade was metal coins. The literary works of the period mention three types of coins—*dinăra*, *puraṇa* and *karṣapaṇa*. *Dinăra* was made of gold, *puraṇa* of silver and *karṣapaṇa* of copper. The circulation of these coins except those of silver during the Kuṣāṇa period is attested by the archaeological excavations. Thus, although an inscription of Huviṣka from Mathurā records a perpetual endowment of 550 *puraṇas* to two guilds for feeding brāhmaṇas in the *puṇyasāla*, actually very few Kuṣāṇa silver coins have come to light in course of

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49. For the provenance of some of the semi-precious stones, see G.L. Adhya, *op. cit.*, p. 65.
50. *ASI-AR*, 1910-11, p. 11. It may be pointed out that the statues in Mathurā style have been discovered also from Kauśāmbī (*EI*, XXIV, p. 211), Sārnāth (*EI*, VIII, p. 173) and Pāṭaliputra (*ASI-AR-EC*, 1972-13, p. 57) also.
51. The word *pravārika* occurs in the Kuṣāṇa inscriptions in the sense of cloak-makers. See *EI*, XIX, no. 1, p. 66.
52. *Luders List*, *op. cit.*, nos. 15, 157, pp. 47, 191-92.

excavations.[53] It is difficult to explain the non-existence of silver coins of the Kuṣāṇas. We cannot argue that they were melted away by treasure-seekers. Most probably silver seems to be more precious and rare than gold in those timese.

However, the Kuṣāṇa issues in gold and copper are numerous and have been excavated from many sites, either singly or in hoards in the Indian sub-continent. Some of the important urban sites yielding the Kuṣāṇa coins are Begram, Puskalavati, Taxila, Mathurā, Bhita, Kausāmbi, Pāṭaliputra, Vaisāli and a number of sites in the North-West Frontier Province, Panjab, Uttar Pradesh, Madhya Pradesh, Bihar, Bengal and Orissa.[54] Some Kuṣāṇa coins are reported from the Deccan also.[55] The provenance of the Kuṣāṇa coins, thus, indicates their wide circulation as a result of a thriving internal trade under the Kuṣāṇas.

One of the important factors for the flourishing trade and commerce during the Kuṣāṇa period was the regularisation of trade through various laws. The lawgivers of the period prescribe elaborate rules regarding price control, taxes, laws of debt, interest, partnership and other regulations. Manu mentions 18 titles of laws, most of which concerned businessmen. The rates of all marketable commodities were to be fixed by the king in accordance with the distance travelled, period of storage, chances of profit and expenditure incurred. The prices were to be reviewed periodically and made known to the merchants. The merchants were required to pay customs, tolls and ferries at fixed places and those who evaded their payment were to be severally penalized. Weights and measures were to be properly marked and examined every six months. The merchants were to be fixed for making false statements regarding marchandise and adulteration or selling at an improper time. Similarly, sale by private persons in which the state enjoyed a monopoly was not to be tolerated and Manu asked the king to confiscate the property of a trader who indulged in it. Harsh punishments were to be awarded to those who violated the terms of agreement. Although usury was permitted, interest was not allowed to exceed the principal amount itself and compound, periodical, stipulated and corporal interests were never sanctioned. Apart from putting such restrictions on trades, Manu also advised the king to protect artisans and merchants' shops from unsocial elements, and look into the proper maintenance of roads and bridges[55] through which trade might be carried smoothly.

More or less similar laws were prescribed by Yājñavalkya and Viṣṇu. Like Manu, Yājñavalkya also asks the king to fix the prices of commodities, allowing 5 to 10 per cent profit on foreign and indigenous articles.[57] According to him traders were to be taxed on the profit and not on the capital[58] and those who adulterated medicine, oil, salt, perfumes, rice, molasses, earthen materials, hides, threads, etc., were to be fined.[59] Yājñavalkya laid down rules to protect the guilds, *sreṇis* and similar other corporate bodies.[60]

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[53] Few coins belonging to Kujulakadphises were discovered from Taxila. See Marshall, *Taxila*, II, pp. 786, 841.

[54] For the find spots of Kuṣāṇa coins, see B. Chattopadhyaya, *The Age of the Kuṣāṇas—A Numismatic Study*, Calcutta, 1967, pp. 232-40. However, the list of sites in this work is not comprehensive and many important sites do not find mention. For further information see, *INC*, X, pts. I-II, (1972) and *IAR*, 1952-72.

[55] Cited in B.N. Mukherjee, *op. cit.*, p. 114. fn. 53.

[56] *Manu*, ch. VIII.

Viṣṇu imposes 1/10 and 1/20 amount of tax on commodities sold within and outside the country. Sellers and customers both had to pay a toll and those who evaded it fraudulently were to lose their goods.[61] Highest amercement was prescribed for forging a balance or a measure, alleging a correct measure or balance to be incorrect, selling adulterated articles, charging more than the price fixed by a member of a corporation, and for non-delivery of goods to the purchaser after having received the price.[62] Rates of interests on articles like gold, grain, cloth, liquids, female slaves and cattle were regulated, though no limitation was imposed on interest on materials of which liquor, cotton, thread, leather, weapons, bricks and charcoal were made.[63]

We do not know to what extent these regulations were followed in practice; nor do we have a list of large number of state officials, as in the Maurya period, to regulate these provisions. Unlike the *Arthasāstra*, the post-Mauryan lawbooks do not indicate any rigid state control on trade. They suggest only some restrictive methods.

Some idea about weights and measures prevalent during the period can also be formed on the basis of literary and epigraphic material. The *Divyāvadana* mentions terms like, *anjali*, *mānikā*, *vilvāmatraṁ* and *pravedha*. Other terms referred to in the *Milindapanho* are *aṅgula*, *vyāma*, *vojana* and *ammana*.[64] Five kinds of weights and measures like *māna*, *ummānaavamāna*, *gaṇima* and *paḍimāna* are referred to in the Jaina canons. Distance was measured in the terms of *aṅgula*, *vitaṣti*, *ratni*, *kukṣi*, *dhanus* and *gavyūta*. The terms referring to length are *paramāṇu*, *trasareṇu*, *rathareṇu*, *bālāgra*, *liksā*, *yūkā* and *yava*. Time was denoted by words like *samaya*, *āvalikā*, *svāsa*, *ucchvāsa*, *stoka*, *lava*, *muhūrta*, *ahorātra*, *pakṣa*, *māsa*, *ṛtu*, *ayana*, *saṁvatsara*, *yuga*, *varṣasata*, *sirṣaprahelika*, *nālikā* and *saṅkucchāya*.[65] The *Aṅgavijja* even refers to a measuring pot, *uṭṭika-manika*.[66]

As regards the persons engaged in trade and commerce, according to the theory of the *varṇa* system,[67] generally it was reserved for the vaisyas. However, in times

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57. *Yain.*, II. 251-53.
58. *Ibid.*, 261.
59. *Ibid.*, 245-46
60. *Ibid.*, 187, 191.
61. *Viṣṇu*, III. 29-31.
62. *Ibid*, V. 122-27.
63. *Ibid.*, VI. 11-16.
64. B.N. Puri, *India Under the Kuṣāṇas*, Bombay, 1965, p. 115.
65. J.C. Jain, *op. cit.*, p. 121.
66. Motichandra, *op. cit.*, p. 43.
67. *Manu*, VIII. 410; *Viṣṇu*, II. 13.

of distress, both brāhmaṇas and kṣatriyas were permitted to trade, although the brāhmaṇas could not sell certain items prohibited by law.[68] With the weakening of the old Brāhmaṇical order in post-Mauryan times, the rigours of the caste system were slowly vanishing and even the sūdras could participate in trade, for Yājñavalkya recommends that if a sūdra is unable to maintain himself by serving the *dvijas*, he can adopt trade as a profession.[69] The sūdras might have served as peddlers.[70] This may imply an improvement in the condition of the lower *varṇas*.

Two factors seem to have led to the amelioration of the conditions of the lower orders during Kuṣāṇa times. Firstly, the advent of the Kuṣāṇas in large number led to the replacement of existing populations and the establishment of new settlements and thus helped mobility during the first century of the Christian era. Secondly, the increase in the number of crafts and guilds with the corresponding growth in Indian foreign trade, especially with the Roman world, must have reduced the rigours of the caste system in trading ports and inland towns leading to the improved social position of the lower *varṇas*.[71] Thus, there is reason to believe that during Kuṣāṇa times not only the vaisyas but persons belonging to other *varṇas* also participated in the trade.

Trade was carried mostly in groups, though peddlers and *vaṇikas* might have often carried on their business individually. The merchant guilds became essential because in ancient times traffic facilities were not well developed and the journey was full of risks and perils. The merchant guilds might also have been formed to safeguard the interests of the mercantile community from oppressive taxes. The contemporary literary works emphasise the protection of guilds, their property and customs. It appears that there was some kind of mutual understanding between the guilds (*sreṇis*) and the rulers of the land and each safeguarded the rights and privileges of the other. The guildsmen enjoyed prestige in the society and often issued their own seals. However, it is surprising to note that although craftsmen and merchants are mentioned their guilds do not find mention during the Kuṣāṇa period except at one place.[72]

There is thus evidence to indicate that internal trade in India was in a flourishing condition during the Kuṣāṇa period. Traders carried raw-materials and finished products from one place to another either through land or river routes. The use of metal coins as currency stimulated the development of trade. Specific regulations were made to protect the interests of the mercantile community as well as consumers. The traders amassed great wealth, spent it liberally in patronising various arts and religious establishments and thus commanded privilege and prestige in the society.

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[68] *Manu*, X. 85, 95.

[69] *Yājñ*, I. 120.

[70] R.S. Sharma, *Śūdras in Ancient India*, Motilal Banarsidass, 1958, p. 240.

[71] *Ibid.*, p. 219.

[72] *EI*, XXI, no. 10.

II. *Foreign Trade*

Far more important than internal trade was the foreign trade of India during this period. Literary and archaeological sources strongly suggest the flourishing commercial intercourse between India, the Roman world, central Asia, China and south-east Asia. Although Indian trade with the western world is known to have existed ever since the Harappan period, it reached a high watermark under the Kuṣāṇas. Through land India maintained commercial relations with foreign countries from the north-western part of her boundary and by sea through the ports situated in the western and southern regions. The port of Tāmralipti, near the Bay of Bengal, was the main port for the Indo-Chinese and south-east Asian trade.

The sudden spurt in the volume of Indian foreign trade was a sequel to many political and economic developments in India and the countries with which mercantile relations were maintained. Apart from some of these developments discussed earlier, an important cause for the increased trade was the measures adopted by the Roman kings. It has been suggested that the Roman emperors deliberately encouraged sea voyage to India because it meant that all tolls and harbours would fall into Roman hands instead of going to enrich the Parthian and Arab officials.[73] With this end in view, throughout the reigns of Augustus, Vespasian, Trajan, Hadrian, Antonius Pius and Marcus Aurelius, efforts were made to protect the trade routes and improve the traffic system. Sometimes even force was used to ensure peace and security throughout the empire so that trade might prosper uninterrupted.[74] These attempts on the part of the Roman emperors facilitated trade with the eastern world.

Moreover, the mastery of the Romans over the richest parts of Europe, Africa and Asia and their ownership of rich gold mines of Egypt, Spain and Dacia, and their zeal and capacity to exploit fully resources like fertile land, extensive pastures, unworked mines and quarries and virgin forests,[75] placed the Roman economy on a very sound footing. It led to the development of many industries and needed a market for sale. This market was found in the eastern world, especially India, which imported large number of luxury goods produced in the Roman empire.

With a sound economy there was an insatiable demand among the Roman subjects for Oriental luxury goods like the Chinese silk, Indian spices, muslin and precious stones. To meet the growing demand of these objects the Romans were compelled to trade with India even though it had an adverse effect on their economy in the long run. They also issued large number of gold coins to be accepted as foreign exchange. This fostered trade with the Orient, and several Indian embassies visited the Roman empire. Four such embassies are mentioned in the classical accounts,[76] and one of these embassies was sent by a Kuṣāṇa king, most probably Kaniṣka, with commercial objectives.[77] In fact the Kuṣāṇas considered the Romans to be more advantageous friends than the uncommercial Parthians,[78] and maintained commercial relations with the Roman kings. The adoption of the title *Caesar* (*Kaisarasa*) in the Ara inscription of the year 47,[79] and the *murodāsa marjhakasa*, applied to Kaniṣka in the Zeda inscription of the year 11, apparently refer to Kaniṣka's connection with the Roman world and may indicate that he had won the wealth of the Roman empire.[80] Both the Romans and the Kuṣāṇa kings minted gold coins of same standard so as to facilitate the smooth commercial transactions between the East and the West. All these factors gave a fillip to the Indo-Roman trade of which the ultimate beneficiaries were the Kuṣāṇas, who also extracted much wealth as intermediaries between the Chinese and the Roman transactions.

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[73] M.P. Charlesworth, *Trade Routes and Commerce of the Roman Empire*, Cambridge, 1926, p. 63.

[74] E.H. Warmington, *The Commerce Between the Roman Empire and India*, Delhi, 1974 (2nd revised and enlarged edition), pp. 14-15, 84-102.

[75] G.L. Adhya, *op. cit.*, pp. 136-37.

The discovery of monsoon was another significant factor which gave a fillip to trade between the East and the West. The *Periplus* (57) mentions that it was discovered by *Hippalus* and was designated after his name. Pliny also speaks about it. But neither the *Periplus* nor Pliny gives any idea about the date of the discovery of monsoon. Possibly its discovery may be placed in A.D. 45.[81] The discovery of the south-west monsoon greatly reduced the distance between India and the west Asian ports. It has been suggested that the discovery of monsoon helped the south Indians to improve their shipping, made possible the Roman settlements in India in considerable number and opened channels for the import of luxury goods and their increased consumption in Rome and the Roman empire.[82] Thus the discovery of monsoon had far-reaching consequences affecting the maritime commerce between India and the Mediterranean world.

The *Periplus of the Erythraean Sea*, the *Natural History* and other classical accounts give an idea about imports and exports of the Roman world, some of which may be attested on the basis of archaeological discoveries. A glance at the list of trade commodities makes it clear that the Roman import outweighed its export which led to the adverse balance of trade for Rome.

In the first category of articles imported by Rome mention may be made of Indian slaves, eunuchs, attendants, trainers of elephants, female fortune tellers, cooks and fashionable prostitutes. Some animals and birds were also imported by

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[76] E.H. Warmington, *op. cit.*, pp. 36-37.

[77] *Ibid.*, p. 95.

[78] *Ibid.*

[79] *CII*, II. lxxxv, p. 165.

[80] *EI*, XIX, pp. 1-15 (the word *muroda* means the lord and *marjhaka*, rich in treasure. *CII*, II, p. 143).

[81] W.H. Schoff, *op. cit.*, p. 227. However the date of the *Hippalus* is one of the most debated issues. Different dates ranging from the 1st century B.C. to the 3rd century A.D. have been suggested. For details, see Schoff, *op. cit.*, pp. 290-93 and G.L. Adhya, *op. cit.*, pp. 123-25. Warmington proposes four stages beginning from the time of Alexander and Nearchos do about A.D. 50 in the discovery of monsoon, *op. cit.*, pp. 45-46).

[82] E.H. Warmington, *op. cit.*, pp. 66-67, 79.

Rome, but it appears that except parrots and monkeys, other animals were brought to Rome *via* land routes, indicating thereby that traffic in animals was more with Parthia than India. Among the apes and monkeys, notable were *hanūman* from Madras and Malabar, and Nilgiri *laṅgurs*. Others animals were Indian lions and leopards, ounces and caracals, tigers, dogs, humped cattle, yak, rhinoceroses and elephants. India also exported parrots, pheasants, peacocks and snakes to the Roman world. These were probably imported as objects of curiosities.

The import of animal products included hides and furs, rough skins, heavy woollen coats and woollen clothes, fine skins of lions, tigers and leopars, ghee, to be used in medicines, chouries, *pashm* or *pushm* wool of the shawl goat of Kashmir, musk deer, teeth and horns of rhinoceroses, ivory, flesh of lizards, tortoise shell, pearl, Chinese and silk, the lac-dye and lac-resin.[83] Some of these items were brought from the north-western India through land routes, but majority of the articles were shipped off to the Roman world from ports of western and southern India.

Of greater importance were the plant-products exported by India. These were sent not only to satisfy the evergrowing demand of luxury items but also to be used in the preparation of drugs and medicines as condiments in food and wines, incenses and perfumes.[84] The most important of this class of product was pepper, ginger, amomum or cardamomum from south India, Indian and Chinese cinnamon, malabathrum, oil of the spikenard, root of costus, sweet clover, aromatic nut, caryophyllon and gumresins. Most of the gum resins were exported through the Indus region which was under the Kuṣāṇas. There were other non-resinous juices and oils from Indian plants like indigo, lycium, gingelly, sesamum, and Indian or Assyrian poppy (opia). Sugar, Indian cotton and its products like fine muslin, ornamental and timber-woods as well as fragrant woods like sandal, teak, black-wood and ebony were important items of Indian export. Besides, different kinds of fruits and their products are mentioned as being exported to Roman world from India. Thus palm-oil, coconut-oil, banana, sepistan or sebestan plums, melons, peaches, apricot, citron and vegetables like cucumber, onion, pumpkin and gourd were sent to the Roman world. Indian cereals like rice, millets and wheat were also exported. It appears that some plants like coconut and reeds were sent from India as objects of curiosities or as useful ornaments.[85] However, it is difficult to suggest how perishable materials like fruits and vegetables were kept fresh and imported by the Romans when there was no knowledge of refrigeration or cold storage in ships.

In the Roman empire there was a great fancy for Indian mineral products which were used in the decoration of furnitures, utensils, ornaments and other luxurious objects. Roman ladies were so fond of Indian pearls that they not only wore them on their fingers and ears but also put them on their shoes. Important items of Indian export under this heading were diamonds, sard and carnelian, agate, sardonyx, chalcedony, jasper, amethyst, quartz, rockcrystal, opal, hard corundums, sapphire, garnet, ruby emerald and beryl, lapis lazuli, tourmalines, turquoise, asbestos and amber. Pliny tells us that Indians also exported to the Roman empire metals like copper, iron and steel, steel weapons, and gold.[86]

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[83] E.H. Warmington, *op. cit.*, pp. 145-76.

[84] For various uses of spices, see J. Miller, *The Spice Trade of the Roman Empire*, Oxford, 1969, pp. 1-14.

[85] E.H. Warmington, *op. cit.*, pp. 180-221.

Our sources also inform us about the items which were exported by the Roman world to India. The Indians imported slaves, singing girls to be employed by Indian kings or to be kept in their harems, fine red coral of the Mediterranean, flax cloth, Laodicean and Italian wine, storax, sweet clover, metals like gold, copper tin, lead, realgar, orpiment, metal lamps and vases, glass and glass objects.[87] Although the import of Roman pottery is not mentioned in these sources except by implication as wine-containers, the discovery of Mediterranean pot sherds from Indian sites suggests their import in India in considerable numbers.

The inventory of exports and imports, as suggested by contemporary writings, implies that the volume of import of the western world was greater than its export to India. This caused concern in the Roman empire and made Pliny lament that "at the lowest computation India, Seres and Arabia drained from the Empire a hundred million sesterces every year . . . and that India took away from Rome not less than fifty-five million sesterces yearly, giving in return merchandise which was sold for one hundred times its original cost . . . " .[88] We have no means to calculate the actual price paid by the Romans for the Indian goods and the resultant drain of their wealth to India, but the numismatic evidence from India demonstrates that large number of Roman coins poured into India on account of trade.

But how the merchants of south India purchased Roman articles is difficult to explain as coins of base metals like lead, potin, etc., were made under the Satavāhanas and these must not have been taken in exchange for Roman merchandise. Are we then to suppose that Indian and Mediterranean merchants followed the barter system? The possibility of barter does not seem convincing because by the time the Indo-Roman trade matured, the use of coins had become fairly common. Moreover, Pliny explicitly mentions the drain of Roman sesterces to India which must have been spent on purchasing Indian goods. Therefore the other possibility, though purely hypothetical, seems to be that the south Indian merchants also utilized the the Kuṣāṇa gold coins which were similar in weight and standard to Roman gold coins.

An important point to be noted is that the Indian export mainly consisted of raw-materials whereas the Romans exported mostly finished goods manfactured in different industrial centres of the Roman empire. It may also be pointed out that some objects (e.g., the Chinese silk) were not Indian products, but were passed on

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86. E.H. Warmington, *op. cit.*, pp. 235-58.

87. *Ibid.*, pp. 261-72. For a list of imports and exports of the Roman empire in the time of the *Periplus*, see Schoff, *op. cit.*, pp. 284-88.

88. Quoted by E.H. Warmington, *op. cit.*, p. 274.

to the Mediterranean countries by the Indian merchants who acted as middlemen. Most of the Indian exports were shipped from the western and southern coasts of India but the possibility of the land route, *via* Bactria, being utilized in the Indo-Roman trade, cannot be ignored.

The early centuries of the Christian era not only witnessed the growth of Indo-Roman trade but also that of mercantile relations with central Asia, China and south-east Asia, though the sources bearing on them are not as plentiful as we notice in the case of the Roman trade with India. The Kuṣāṇa occupation over parts of central Asia and north India facilitated this trade, but we do not have much information about the articles of this trade. The *Periplus* however, inform that from China raw silk, silk yarn and silk cloth were brought by land route through Bactria to Barygaza and then sent to Damirica (south India).[89] The trade between India and China is also evident from the Chinese texts the *Hou-Han-Shu*, the *Wei-Shu* and the *Sui-Shu*.[90] Ptolemy suggests the existence of a road between India and China, passing through Pāṭaliputra. The *Milindapanho* also speaks of men coming to Sāgala from China.[91] Maritime trade between south India and China has been suggested on the numismatic grounds, but the Chinese coins discovered from Chitaldrug in Mysore do not provide a basis for such conclusions.[92] Similarly, the reference to the Gold Land or *Suvarṇabhūmi* in the *Jātakas* and the *Milindapanho*[93] may be taken to suggest commercial relations between India and some south-east Asian countries like Burma, Malaya, Indonesia and Cambodia.

It has been suggested that Indians directly participated in the trade with the south-east Asian countries and did not act as middlemen as we notice in the case of the Indo-Roman trade. Since the demand for Oriental luxury items was increasing considerably during the period and since this could not be fulfilled from Indian sources alone, the Indian merchants found a regular source of supply of minerals, spices and aromatics in south-east Asia. This accounts for India's trade with south-east Asian countries during the early centuries of the Christian era.[94]

The archaeological evidence regarding Indian foreign trade during the early centuries of the Christian era is not as plentiful as we find in the contemporary literature. The reasons for it are obvious. Bulk of the articles of trade mentioned in the literary works were of perishable nature and hence the possibility of their being unearthed in course of excavations is very remote. Moreover, in spite of several years of archaeological diggings in India, parts of the Roman empire, central Asia and China, most of the sites connected with ancient trade have not been explored fully and satisfactorily. This accounts largely for the absence of sufficient

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89. W.H. Schoff, *op. cit.*, p. 64.
90. G.L. Adhya, *op. cit.*, p. 162.
91. *Milinda*, p. 11.
92. G.L. Adhya, *op. cit.*, p. 165.
93. *Jātakas*, III. 360; IV. 442; *Milinda*, p. 359.
94. G.L. Adhya, *op. cit.*, pp. 175-76.

archaeological data bearing on India's foreign trade. Nevertheless, whatever archaeological material exists points to the commercial traffic between India and other countries during the early centuries of the Christian era.

The best archaeological evidence for the Indo-Roman trade connections is provided by a number of sites in the western and southern India. Years of excavations in these regions have brought to light the Roman coins in India, Mediterranean pot sherds and a Roman trading station at Arikamedu, near Pondicherry. But the material remains suggesting the commercial relation of north-western India are comparatively meagre.

India's trade relations with the Roman world is suggested by the discovery of a large number of Roman coins found in India. These coins have been found usually in hoards from parts of the North-West Frontier Province, Afghanistan, Panjab, Madhya Pradesh, Uttar Pradesh, Bihar, Maharashtra, Madras, Cochin, Hyderabad, Mysore, Travancore and Ceylon.[95] Roman coins and their imitations have been reported from other sites also. Some inferences may be drawn from the distribution chart of the Roman coins. Firstly, the coins occur more prominently in southern and western India than in northern and north-western India. The paucity of the Roman coins in northern India has been taken to suggest that this part of the country was not in direct commercial contact with the Roman world. But this view need not be taken too seriously. The discovery of Roman coins from Madhya Pradesh, Uttar Pradesh, Bihar,, Bengal and Orissa implies that these regions also were commercially in touch with the Roman world. Their relative scarcity in northern India therefore might have been due to the fact that the circulation of the Kuṣāṇa gold and copper coins in the area precluded the possibility of the inflow of the Roman gold and silver coinage which, according to the *Periplus*, was an article of import to western India. Still another possibility may be suggested. As the trade of north-western India was mainly of transit nature, the coins did not remain there, rather, they were carried to south India where terminal trade flourished.

Wheeler, on the basis of large number of defaced Roman gold coins from Madura, Karukkakuricchi, Tondamanathan, Karivalamvandanallur, Nondyal and Gumada, suggets that the absence of Roman coins in northern India was the result of an attempt on the part of the Kuṣāṇas to deface and remint the Roman coins and then regulate them in circulation. According to Wheeler, the Kuṣāṇas adopted measures to see that "such Roman gold as was admitted to their border states was removed by mutilation from possible rivalary as currency and and relegated to use as bullion or ornament . . . .[96] But the Kuṣāṇas did not depend entirely upon the supply of the Roman gold. They procured it also from the Oxus region and used the mines of Ural and Altai for getting gold.[97] Possibly they also obtained gold from China through the Silk Route. At any rate, the discovery of Roman coins in India furnishes a concrete evidence of the Indo-Roman trade in which northern India also participated under the Kuṣāṇas.

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[95] *JRAS*, XXIII (1904), pp. 591-617; *AI*, No. 2 (1946), pp. 116-21.

[96] K.E.M. Wheeler, *op. cit.*, pp. 169-70.

[97] G.L. Adhya, *op. cit.*, pp. 179-80.

Roman pottery and other antiquities either of the Mediterranean origin or bearing Roman influence found in the Satavāhana and Kuṣāṇa horizons at a large number of sites also point to the existence of Indo-Roman trade. Arikamedu near Pondicherry, which was an important Indo-Roman trading station, has revealed 'Arretine' ware with imported copies, 'amphorae' and rouletted black ware with foreign influence. An important discovery from Arikamedu is potter's stamp noticed on 'Arretine' ware. Stamps of two families of Arezzo potters, the Vibii and the Vibieni, are distinctly noticed.[98] From Yeleswaram (Nalgonda district, Andhra Pradesh), Red Polished sprinklers, comparable to Samian ware of its imitation, was discovered along with other wares in Roman texture and fabric.[99] Similar pottery has been reported from Maheshwar near Indore in Madhya Pradesh.[100] From Nevasa sherds of amphorae with resinous coating confirm the information regarding the import of Roman wine to India.[101] Other important sites yielding Roman pottery are Brahmapuri (Kolhapur), Shamalaji, Timbarva, Ter, Nagara, Dwarka, Akota near Baroda, Sisupalgarh, Tamulk, Bhokardan (ancient Bhogavardhana) and many other sites. The discovery of Roman pottery from a large number of places in India may be taken to indicate either its direct importation or its influence on Indian potters. It is significant to note that all the sites yielding Roman sherds were well-connected with trade routes.

Besides pottery, other objects like Graeco-Roman gems, terracotta lamp, and glass-bowls from Arikamedu,[102] large number of unfinished beads of agate and chalcedony, a terracotta coin-mould of the Roman Augustus Hadrianus from Ujjain,[103] terracotta figurines with Graeco-Roman influence from Yeleswaram,[104] terracotta, lead and gold bullae, a copper or bronze dish with an Omphalos and a unique kind of Rotary quern from Nevasa,[105] suggest India's connection with the western world. Of equal importance in this connection are clay bullae, Roman glass bangles and Venetian beads, Graeco-Roman statuette of Poseidon made of bronze, trefoil-shaped bronze vessels, spouted bronze jug from Brahmapuri[106] Imitations of Roman coins are reported from places like Kondapur, Chandravalli, Rajghat

98. *AI*, no. 2 (1946) pp. 34-41.
99. A.W. Khan, *A Monograph on the Excavations at Yeleswaram*, An Andhra Pradesh Government Archaeological Series, No. 14, p. 10.
100. H.D. Sankalia and others, *Report on Excavations at Maheshwar and Navadatoli*, Poona, 1958, pp. 160-61.
101. *Idem*, *Front History to Pre-History at Nevasa*, Poona, 1960, p. 280.
102. *AI*, no. 2 (1946), pp. 101-02.
103. *IAR*, 1956-57, p. 20.
104. A.W. Khan, *op. cit.*, p. 11,
105. H.D. Sankalia and others, *op. cit.*, pp. 200, 504.
106. H.D. Sankalia and M.G. Dikshit, *Excavations at Brahmapuri (Kolhapur)*, Poona, 1952, pp. 97, 117, 145, 150.

(Banaras), Karad (near Kolhapur) and Sisupalgarh.[107] Fragments of Roman bronze are noticed at Akota (Baroda).[108] From Bhokardan have been discovered six terracotta bullae imitating the aurei or denaril of Tiberius.[109] All such finds bear testimony to close relations between India and the western world during the early centuries of the Christian era. This contact was mainly commercial which brought to India Roman objects or ideas which influenced Indian life.

However, the Roman trade left no enduring impact upon the culture of the Indian peninsula. It left only a superficial imprint, 'but nowhere south of the Vindhyas was that imprint more than a graffito upon an essentially self-sufficient native fabric'.[110]

In north-western India, however, the situation was somewhat different although this area has produced comparatively mimor evidence of Indo-Roman contacts. The finds from this area seem to be either "opportunist purchase or levy from passing caravan", but do not suggest a regular traffic in the Mediterranean articles.[111] However, the Graeco-Roman influence in this area is traceable mainly in the form of Gāndhāra art which prospered in north-western India under the Kuṣāṇas.

At Sirkap, many objects exhibiting the Mediterranean influence were noticed during the course of excavations. These included large amphorae of Mesopotamian or Graeco-Roman form, bronze statue of Harpocrates, silver emblem of Dionysus or Silenus, silver spoon of Graeco-Roman type, bronze saucepans and a gold set carnelian bearing figures of Eros and Psyche with a small child, and a nicolo engraved with a winged Cupid running after a bird which is similar to a gem, discovered from Arikamedu. Similarly a large number of sculptures with Graeco-Roman influence, like the stucco head of a child from Jaulian and Dharmarajika monasteries, a schist frieze from Kuṇāla monastery (Taxila), terracotta version of Apollo Belvedere and a stone relief representing *Laocoon* in the western costume from Charsada and similar other stuccos from Hadda[112] reveal western influence which must have come to the Kuṣāṇa empire through regular commercial relations. A bronze statuette of St. Peter was also discovered at Charsada though it belongs to a later period (6th or 7th century A.D.).[113] Mention may also be made of plaster medallions, bronze objects, glazed earthenware, glassware, tumblers and a large number of Roman coins from Begram.[114]

Some idea about the Indo-Roman trade can be formed on the basis of Indian objects discovered in the Mediterranean world. Of special interest are the antique diamonds (Indian) set in several rings and one gold seal, preserved in the British Museum, and collections of quartzes and opals in the British Museum, Paris, Berlin, Vienna, Florence and Leningrad.[115] They confirm the export of Indian minerals to the western world. Some idea about the import of Indian animals and products connected with them may be formed by the representation of animals and birds in paintings, frescos and religious shrines. Thus we notice peacocks (most probably Indian) in a painting at Pompeii,[116] serpents in the house shrines at Pompeii and Herculaneum,[117] and elephants on a number of frescos. The elephants are noticed on a good number of Roman coins also.[118] Moreover a silver dish, representing a typically Asiatic figure, sitting upon an Indian chair resting on ivory tusks as on legs and surrounded by a *hanūman*, some carnivorous animals like leopard, tiger and some birds, were discovered from Lampsacos.[119]

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[107] *Ibid.*, p. 97.
[108] *Bulletin of the Baroda Museum and Picture Gallery*, VII, pts. 1-2 (1949-50), p. 22.
[109] S.B. Deo and R.S. Gupte, *Excavations at Bhokardan*, Nagpur, 1974, pp. 74-75.
[110] R.E.M. Wheeler, *op. cit.*, p. 182.
[111] *Ibid.*, p. 190.
[112] *Ibid.*, pp. 189-91.
[113] *East and West*, IV (1953-54), pp. 247-54.
[114] *Ibid.*, II (1951-52), p. 75.

But far more interesting than the above-noted objects is an ivory statuette from Pompeii, a beautiful specimen of Indian art. It is the first "pure product of Indian art discovered in the archaeological strata of Greek and Roman cities of the Mediterranean basin", and adds to the existing information about India and her commerce.[120] The figurine is taken to represent *Lakṣmī*, the Indian goddess of wealth and fortune, and compares well with the *Yakṣiṇīs* of Bharhut and Sanchi and some of the naked women on the reliefs of Bhutesar pillars or on other monuments of Mathurā. It also bears mark of *triśūla*. The statuette reached Italy before A.D. 79 and appears to be a product of the Kuṣāṇa period.[121] A similar ivory figurine has been disovered from Ter (Tagara).[122] An ivory statue, representing *Lokapāla*, of central Asian origin, is reported from Ostia also.[123]

The significance of these finds lies in the fact that they give definite evidence of the Indo-Roman trade during the early centuries of the Christian era and corroborate to some extent the information about the items of Indian trade[124] gathered from the literary works of the period.

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115. E.H. Warmington, *op. cit.*, pp. 236-37.
116. *Archaeology*, XX, no. 1 (1967), p. 37.
117. *American Journal of Archaeology*, XL (1942), pp. 13-21.
118. *Ibid*, XXVII (1923), pp. 302-13.
119. E.H. Warmington, *op. cit.*, p. 143. (However, the identification of animals is not certain. See p. 394g).
120. *JUPHS*, XIX, p. 7.
121. *Ibid.*, pp. 1-9.
122. *Lalitkal*, VIII (1960), pp. 7-14. For various views on the statuette from Pompeii, see also *East and West*, I (1950-51), pp. 15-16 and II (1951-52), p. 76. Warmington suggests that the statuette went to Pompeii through the port of Barygaza (Broach). See *op. cit.*, p. 394g, h.
123. *East and West*, I, p. 16.
124. Philological evidence also points to the commercial relations between India and the western world. Tin is mentioned as *Kassiteros* in Greek whereas in Sanskrit it is called *Kasira*. 'Elephant' is derived from Sanskrit *ibha*, preceded by the Arabic article *el*. The ape is *Kapi* in Sanskrit, *Koph* in Hebrew and *Kafu* in Egyptian. Peacock is from *togai* in Tamil, whereas it occurs as *tavus* in Persian, *tofos* in Hebrew and *taws* in Greek. Rice is *arus* in Greek, derived from *arisi* in Tamil; ginger from Tamil *inji* and pepper, Greek *peperi*, from *pippali* in Tamil. Cinnamon is *kinnamomon* in Greek, *ginnamon* in Hebrew; it is *karuppu*, or *karppu* in Tamil. See *IAC*, 1954-55, pp. 184-85.

However, the archaeological evidence suggesting Indian trade with China and other south-east Asian countries is almost negligible. Some interesting objects have been discovered at Begram. Here, a hoard of antiquities concealed in two rooms, which formed part of the Kuṣāṇa palace, was unearthed. The hoard consisted of lacquer bowls of China, ivory from India, apart from glass vessels from the Mediterranean, bronze objects and a cluster of steel-yard weights in the form of Minerva or Mars. The ivory work betrays the Kuṣāṇa influence of Mathurā workmanship. Perhaps the hoard represents the 'salvage of a Kuṣāṇa palace or palaces in India'.[125] The inclusion of the Chinese object in this collection suggests the importation of these objects in India. Indian jewellery along with Chinese and Roman objects was discovered at maritime town of GOCEO in Cochin China.[126] We may also point out that some fragments of sprinklers reported from Yeleswaram have pouch like bulges at the base, suggesting a Burmese analogy.[127]

As far as India's trade relations with central Asia are concerned, many objects with Indian influence have been discovered in excavations of central Asian sites. Of particular interest are elephant-shaped chessmen of the Kuṣāṇa period from Delverzin Tepe in Southern Uzbekistan,[128] bronze handle of a mirror representing a female figurine (Indian style) from Kara Bulak in South Kirgiziya, a document in Brahmi script on birch-bark from Kafyr (Tadzikistan) indicating relations between India and central Asia, and a monkey with its baby showing Indian influence, from Koy-Krylgan-Kala. Moreover, some wall paintings at Toparak-Kala (Uzbekistan) resemble the paintings of Ajanta. The "Hall of the Black Guards", probably represents south Indian types.[129]

We may point out here that the paucity of material relics in north-western India was mainly due to the transitory nature of trade and the perishable condition of the merchandise. On the other hand, south India, which participated in the terminal trade, has yielded more material bearing on the Indo-Roman commercial contact.

Trade Routes

The flourishing inland and foreign trade during the period presupposes a highly developed network of water and land channels through which caravans and mariners transported merchandise from one place to another. The classical accounts and the Indian literature acquaint us with routes connecting far-flung places in the Mediterranean world and the Chinese empire with Indian ports and marts. We are also informed of the internal traffic system connecting trading centres of north-west, south and eastern India with each other and ultimately joining the routes through which bulk of Indian trade was carried on. It appears that almost every commercial centre was connected by highly developed land and riverine routes which facilitated commerce both within and outside the country. Since much literature exists on the subject, we shall discuss here only the main trade routes.

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[125] R.E.M. Wheeler, *op. cit.*, pp. 193-94.

[126] *East and West*, II, p. 74.

[127] A.W. Khan, *op. cit.*, p. 9.

[128] N.P. Dwivedi, *Indian Ivories*, New Delhi, 1976, p. 9.

[129] Gregoire Frumkin, *Archaeology in Soviet Central Asia*, Leiden, 1970, passim.

Sea-routes to Foreign Countries

Bulk of Indian trade during the period was kept alive through sea-routes, connecting it with the ports of the Roman world and the Chinese empire, as also with the countries of the south-east Asia. *The Periplus of the Erythraean Sea* provides the best account of the sea channels across the Indian ocean and of the traders of the Persian Gulf, Somalia, Adulis, Cana, Muza and Egypt who visited the Indian ports situated on the western and eastern coasts of India. It also mentions some of the important ports and inland towns from where merchandise was exported to the Roman world. Of these trading stations, the notable ones were Barygaza (Broach), Suppara (Sopara), Calliena (Kalyana), Masalia (Masulipattanam), Taprobane (Ceylon), Paithan (Aurangabad), Ter (Tagara), Camara (Karikol), Poduca (Pondicherry) and Sopatama (Madras). The account of the *Periplus* is corroborated by other classical sources, notably Ptolemy's *Geography*.

After the discovery of the monsoon trade *via* Red Sea became comparatively much easier. The ships sailing to India from Egypt started their voyage from Myos Hormos (Mussel-Harbour), although there were also other important ports like Arsinoe and Berenice. The importance of this port increased because other two ports were less navigable. In the Nabatean control were the ports of Aila and Leuce Come. From here merchandise was taken, apparently by land route to Petra and the Mediterranean. Proceeding further from the port of Myos Harmos the merchants came to Adulis (Massowa), which served as a depot for the Axumites (Abyssinia), Muza and then Ocelis near cape Acilaat, the strait of Bab-el-Mandeb, the last place beyond which Indian ships were not allowed by the Arabs even during the hey-day of Augustus.[130] Near Ocelis Indian wares and merchants were to be found in the markets of Somali, Socotra and Aden. From Ocelis, ships passing through the coasts of Eudaemon Arabia, Hadramut and Cane reached Barbaricon on the Indus.

From the Indus, the merchants after crossing Eirinon (Rann of Kutch) and Baraca (Gulf of Kutch) reached Barygaza (Broach) in the Gulf of Cambay. From here, they moved on to the ports situated in the kingdoms of the Cheras, Pandyas and Cholas, comprising the areas of Malabar, Cochin, part of Travancore, Tinnevelly and Madura.

From the Deccan the merchants moved towards the eastern coast of India, but the *Periplus* does not give details of these ports. However, it mentions

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[130] E.H. Warmington, *op. cit.*, p. 13.

Taprobane (Ceylon), Masalia (Masulipattanam), Dosarene (Orissa) and Ganges (Tamralipti). Although the *Periplus* refers to Chryse (Malaya) and This (China), it does not indicate whether the western ships sailed to these places. But it appears from the *Periplus* that the Chinese silk was brought from Bactria to Barygaza through the land route and from China to the Tamil land through the Bay of Bengal.[131] Thus we notice a direct commerical contact between the Roman world and the coastal ports of India. Many of the coastal and inland towns mentioned in the *Periplus* flourished on account of the Indo-Roman trade.

But far more important than the sea routes to the Mediterranean world were the land routes between India, central Asia and China on the one hand and the Mediterranean world on the other. The importance of these routes lay in the fact that they passed through the Kuṣāṇa empire. The Kuṣāṇas acted as intermediaries between the Chinese and the Roman empires and profitted much from this trade. The prosperity of Kuṣāṇ towns depended largely on the wealth derived from this international trade.

The most important of the overland routes was the Silk Road, connecting China with the Mediterranean through central Asia and India *via* Bactria. Since much of the Chinese silk was carried astride this route emanating from China, it came to be known as the Silk Road. The existence of this route was made possible by the occupation of a greater part of Eurasia by the four powerful and prosperous contemporary empire : the Roman empire in the west, China in the east, the Kuṣāṇa empire extending from Aral Sea to the Indus and the Ganges, and the Parthian empire in the middle.[132] Although there was constant rivalry between these powers for the control of the route, it seems that the Kuṣāṇas managed to have some agreement with the Chinese and the Roman empires. This is evident from Pan-Chao's mission sent to Rome through the Kuṣāṇa territory and the Kuṣāṇa embassy to Rome soon after the differences between the Kuṣāṇa king and China over the demand of the hand of a princess in marriage.[133] A further evidence of the understanding between the Chinese, Roman and Kuṣāṇa empires may be deduced from the fact that the Roman traders maintained direct commercial relations with India through the Indus which was under the Kuṣāṇa control and that the Chinese silk, as the *Periplus* (64 informs, was brought to Barygaza by land through Bactria over which the Kuṣāṇas held their sway. Since all the transcontinental routes converged at Bactria, the Kuṣāṇas profitted much from the silk trade. The Kuṣāṇas traded directly with China and Rome and compelled the Parthians to purchase their silk from them.

The silk route, covering a distance of nearly 4,350 miles from the eastern terminus to Selucia or Ctesiphon, started from Loyang and passing through Changan (Sian) Lanchow, Muwei (Langchow), Chang Yeh, Yamen, 'the Jade Gate', Anshi, Tunhwang and Tsiemo (Asmiraea) reached Lop Nor. From Lanchow

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131. *Periplus*, 64. See also L. Boulnois, *The Silk Road*, London, 1966, p. 56.
132. L. Boulnois, *op. cit.*, p. 60.
133. *Ibid.*, pp. 67, 70.

a branch route moved towards the Bay of Bengal passing through Sikkim, while the main route, moving onwards from Lop Nor reached Kashgar. Actually from Lop Nor two sub-routes moved respectively towards the north and the south of the Takla Makan desert until they were united at Kashgar. Moving further westward one could reach the 'Stone Tower', Bactra (Balkh) and Merv.[134] From the Indian point of view Bactra and Merv were the most important trading centres. From Bactra, routes passing through the Hindukush reached Begram (Afghanistan), Taxila and connected other inland routes. The importance of Merv lay in the fact that it was connected with the ports and marts of the Roman world. Alexandria, Antioch, Seluceia, Ecbatana, Rhagal, all were directly connected with Merv. The Silk Road, thus, connected China, central Asia, Parthia and the Roman world with India.

Warmington points to the existence of a route astride which Indian goods were sent to Russia and to the West, though not used by the western merchants. This route, leaving central Asia by Oxus (Amu Darya), moved across or round the Caspian to the Black Sea, but details regarding this route and its Indian trade are lacking.[135]

Towards India, the route from Bactra passed through the Hindukush to Kabul, the Khyber Pass and ultimately reached Taxila from where inland routes ran in two directions : north to south connecting Taxila with the lower Indus basin and then to Broach on the Gulf of Cambay, the chief port for western sailors. The other route known as the *Uttarāpatha* (northern route), passed through the 'Land of the Five Rivers' and reached Mathurā, the eastern capital of the Kuṣāṇas. From Mathurā, one route moved towards Ujjain in central India (Malwa) and from there to Barygaza, while the other passed through the Ganges, reached Pāṭaliputra and ultimately Tāmralipti in the Bay of Bengal, the chief port for eastern trade. Thus whole of India was connected with well developed land and water routes with the and the Roman world through which mercantile relations were maintained during the Kuṣāṇa period.

Most of the towns of *Uttarāpatha* were either connected with each other by land or river routes from Gāndhāra to the lower reaches of the Ganges in Bihar. Of these cities Mathurā, Kausāmbi, Srāvasti, Pāṭaliputra and Vaisāli had special significance as they were connected with the whole of India, through a number of feeder routes. Ujjain seems to be an important centre through which trade between the Kuṣāṇas, the Kṣatrapas and the Satavāhanas was maintained. Whereas the Satavāhanas fattened on the seaborne trade, the Kuṣāṇas profitted from the Silk Road trade. As long as commerce thrived on this route, towns flourished in north India, but they declined with the disruption of trade on the Silk Road on account of political upheavals in the Roman and Chinese empires, the movement of the Sassanians and Hunas in central Asia and the decline of the Kuṣāṇa empire.

[134] J. Miller, *op. cit.*, pp. 121-33.

[135] E.H. Warmington, *op. cit.*, p. 26.

CHAPTER SIX

THE DECLINE OF KUṢĀṆA TOWNS IN INDIA

MOST OF the towns mentioned earlier witnessed a state of decline in the post-Kuṣāṇa and later periods. The withdrawal of the mighty hands of the Kuṣāṇas, decline in commodity production, emergence of a new socio-political set-up and natural calamities, mainly account for this decline. Almost all the sources—contemporary literary works, the travel accounts of the Chinese pilgrims who visited India in later period, and above all, the material remains and structural evidence from the excavated sites—unmistakably suggest the decline of urban centres in the post-Kuṣāṇa period.

Literary Evidence

Indigenous literature preserves some reference to towns which wore a deserted look. The *Raghuvaṁśa*, for example, refers to the town goddess of Ayodhya (*nagaradevi*) bewailing her lot after the departure of Rāma to *vaikunṭha*, and describes the deserted palaces, streets and roads, water tanks, gardens and orchards.[1] This reference may be taken to suggest the general appearance of the towns when they fell on bad days.

The testimony of the Chinese pilgrims Fa-hsien (A.D. 405-11) and Hsuan-Tsang (A.D. 630-44) is also note worthy in this connection. They give an account of decadent towns and monasteries. But whereas Fa-hsien's account is sketchy, Hsuan-Tsang speaks of some towns at length. Thus he notices that the capital of Gāndhāra (*Kien-To-Lo*), Puruṣapura or Peshawar (*Po-lu-sha-pu-lo*), was about 40 *li* in circuit. The royal family was extinct and the kingdom was governed by deputies from Kapisa. The towns and villages were deserted and there were few inhabitants. At one corner of the royal residence there were about 1000 families. All the *saṁghārāmas*, nearly 1000 in number, were deserted and were in ruins. The *stūpas* had also mostly decayed. The heretical temples, numbering 100, were occupied pell-mell by heretics.[2] Hsuan-Tsang also observes that the *stūpa* built by Kaniṣka "had just been destroyed by a fire calamity. Steps are being taken for its restoration, but they are not yet complete".[3] The *saṁghārāma* built by Kaniṣka had also somewhat decayed. The priests living here were few in number. The chamber of Parśvika had long been in ruins.[4] To the north of the town of Puṣkalāvati (*Po-shi-kie-lo-fa ti*), there was an old *saṁghārāma* of which the halls were deserted and cold, and there were very few priests in it.[5]

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[1] M.R. Kale (tr.), *The Raghuvaṁśa*, Motilal Banarsidass, 1972 (Reprint), XVI, 9-23.

[2] Samuel Beal, *Buddhist Records of the Western World*, London, 1884 (Indian reprint, Delhi, 1960), Bk. II, pp. 97-98,

[3] *Ibid.*, p. 103.

Hsuan-Tsang's account of Taxila (*Ta-Cha-Shi-lo*) is more or less the same. When the pilgrim visited the place, the royal family had been extinct and the nobles contended for power by force. Formerly it was under the subjugation of Kapisa, but lately it had become a tributary to Kashmir (*Kisa-Shi-mi-lo*). Although there were many *saṁghārāmas*, they were in ruins and there were very few priests. He also mentions that near the *nāga* tank there was a *stūpa* and a *saṁghārāma*, which was in ruins and which for a long time had remained deserted and even without priests.[6]

Thus the once famous country of Gāndhāra with its rich and prosperous cities was in a state of utter ruin and desolation. Although Hsuan-Tsang mostly refers to the religious institutions of the place, there is no doubt that these establishments decayed on account of the general decline in the country, As long as people were rich and contributed generously, as long as there was peace and prosperity in the land, these religious establishments flourished, but with the impoverished economic condition of the people, endowments were stopped which ultimately led to the desolation of the religious establishments. The political instability in the region might also have been a potent factor. At any rate, the impression is that the entire land of Gāndhāra had fallen on bad days.

Archaeological Evidence

Decay of urban centres in the post-Kuṣāṇa times is also confirmed by archaeological excavations. The material remains and structural complexes noticed at Kuṣāṇa towns become poorer in the post-Kuṣāṇa period. The excavations clearly indicate the degenerated economic condition of the people in post-Kuṣāṇa times, which may have diminished not only the importance of many towns but also led to their final desertion. Excavations of a number of town-sites, e.g., Vaisāli, Pāṭaliputra, Chirand, Rajghat, Kausāmbi, Srāvasti, Hastināpura, Mathurā, Purana Quila and several sites in Haryana and Panjab, which generally thrived in the Kuṣāṇa age, began to decline from the Gupta period and mostly disappeared in post-Gupta times. Hence it has been rightly remarked that "the post-Gupta period proved to be the graveyard of many old commercial cities in northern India".[7]

The excavations in the Gāndhāra region fully bear out what Hsuan-Tsang says in his account. Charsada (Puṣkalāvati) suffered a serious set-back at the hands of Mihirakula, the Huṇa chief, in the early part of 6th century. He is said to have destroyed nearly 16,000 monasteries and *stūpas* in Gāndhāra. The excavations of the Buddhist monuments at Palaṭu and Ghaz ḍheris near Puṣkalāvati suggest that they were destroyed by some invading people. The numismatic evidence indicates that the desruction took place in the late Kuṣāṇa period.[8] Wheeler's excavation also suggests that after the 7th century A.D. the city was lost for ever.[9] This is clearly borne out by Al-Biruni, who, though mentions Chind and Parshawar, while describing the route from Kanauj to Ghazni, does not refer to Puṣkalāvati. This leaves no doubt that Puṣkalāvati had lost its significance by A.D. 1030.[10]

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[4] *Ibid*, p. 104.
[5] *Ibid.*, p. 109.
[6] *Ibid.*, Bk. III, pp. 136-39.
[7] *IHR*, Vol. I, no. 1 (1974), p. 5. See also *PIHC*, 1972, pp. 92-104

At Saikhan Dheri the city lost its metropolitan character and the site was given up during the reign of Vasudeva I whose coins were the latest issues[11] available from here. The excavations also revealed that during the last stage of the occupation of the city its area shrank considerably due to flood in river Zinde. Consequently the habitation shifted to the neighbouring town of Rajar towards the close of the 2nd or middle of the 3rd century A.D.[12]

At Taxila the same story of decline and destruction is noticed in the post-Kuṣāṇa period. The city site of Sirkap at Taxila, which remained under the Kuṣāṇa occupation till the reign of Wema Kadphises,[13] was shifted to a new site at Sirsukh. On the basis of numismatic grounds A. Ghosh, however, suggests that the Kuṣāṇa occupation of this city lasted till the reign of Huviṣka and soon after his reign it was finally deserted. According to Ghosh[14] the approximate date for the decline of the city of Taxila (Sirkap) would be between A.D. 150 and A.D. 200.

As regards the city of Sirsukh at Taxila, founded by the Kuṣāṇas in the proximity of Sirkap, we are not in a happy position regarding the chronology of the site on account of limited excavation. However, as the later Kuṣāṇa coins are followed by those of the Indo-Sassanians and later on by the Mughal coins,[15] it may be presumed that the Sassanians who wrested power from the Kuṣāṇas destroyed the last vestiges of this city. This is substantiated by the fact that at almost all the Buddhist sites in and around Taxila, coins become scarce in the post-Kuṣāṇa period. The chart on next page gives an idea of the number of Kuṣāṇa (uptil Vasudeva I) and post-Kuṣāṇa (including later Kuṣāṇa, Sassanian, Indo-Sassanian, Huṇa)[16] coins found Taxila :

The chart indicates that out of the total number of 2970 coins discovered from the Buddhist monuments at Taxila, 2207 coins belonged to the imperial Kuṣāṇas and only 763 to the post-Kuṣāṇa period. The numismatic evidence, thus, implies that

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[8] *ASI-AR*, 1902-03, p. 164.

[9] M. Wheeler, *Charsada*, OUP, 1962, p. 9.

[10] *ASI-AR*, 1902-03, p. 143.

[11] *AP*, II, p. 23.

[12] *Ibid.*, p. 24.

[13] John Marshall, *Taxila*, I, p. 112.

[14] *AI*, no. 4, p. 45.

[15] J. Marshall, *op. cit.*, I, p. 221.

[16] This table has been prepared on the basis of Marshall's *Taxila*, I.

Sites	*Kuṣāṇa coins*	*Post-Kuṣāṇa coins*	*Total*
1. Jandial	17	2	19
2. Mound "D" at Jandial	9	1	10
3. Dharmarajika	1485	460	1945
4. Site "A" (Khader Mehra)	2	—	2
5. Site "B" (Akhauri)	262	—	262
6. Site "C"	12	—	12
7. Site "D"	5	—	5
8. Kalawan	188	5	193
9. Giri	8	138	146
10. Kuṇāla	44	1	45
11. Ghai	2	—	2
12. Mehra Moradu	64	11	75
13. Pippala	8	16	24
14. Jaulian	95	97	192
15. Lalchak	—	6	6
16. Bhamala	6	26	32
Total	2207	763	2970

some how or other the economy of the Gāndhāra region was being shattered slowly. It is also evident from the above evidence that the last issues to be found at these monastic establishments were the coins of the Sassanians, Indo-Sassanians and the white Huṇas. No Gupta coins have been discovered here. This indicates that the old glorious days of Taxila had already vanished during the time of the Guptas. Perhaps it never came under their sway and lay desolate and abandoned. The final destruction of Taxila took place with the coming of the Huṇas who burnt and destroyed the religious establishments at Taxila. The effects of fire noticed at the Dharmarajika[17] and Bhamala[18] along with the Skeletal remains found at Dharmarajika[19] clearly demonstrate that the site was completely burnt and monks massaccred by the white Huṇas towards the end of the 5th century A.D.

Moreover, among the remains that have come to light in the neighbouring areas of Taxila, the post-Kuṣāṇa structures are very few and are inferior to those of the Kuṣāṇa period. It is therefore safe to conclude that in the post-Kuṣāṇa period, Taxila lost its importance as a prosperous city and was finally deserted towards the

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[17] Marshall, *op. cit.*, I, p. 285.

[18] *Ibid.*, p. 395.

[19] *Ibid.*, p. 287.

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[17] Marshall, *op. cit.*, I, p. 285.

[18] *Ibid.*, p. 395.

[19] *Ibid.*, p. 287.

As regards the situation in Kashmir, the sources at our disposal are not of much use. The account of the Chinese pilgrim, Hsuan Tsang, does not shed sufficient light on the conditions of Kashmir.[21] Archaeology, however, reveals poor antiquarian remains in the post-Gupta period. Excavations and explorations at a number of sites like Harawan (near Srinagar), Ambaran, Mandi-Ka-Mehra, Guda, Bahor, Dalpat Kot, Pambarwan, Sauli-chak, have revealed Gupta pottery and terracotta in abundance, but the post-Gupta levels at these places have revealed very few antiquarian remains.[22] It appears that Kashmir, which formed part of the Kuṣāṇa empire, suffered at the hands of the Huṇas, the persecutors of Buddhism.

In the Panjab the effects of foreign invasions are clearly visible. The political chaos through which the region passed between the post-Kuṣāṇa and the Gupta periods sufficiently accounts for the decline in urban centres which flourished under the Kuṣāṇas. The final blow was, however, given by the Huṇas. The explorations in Phillaur *tehsil* of Jullunder have brought to light ten sites where the Kuṣāṇa red-ware is followed by Muslim glazed ware. Moreover, out of ten, three sites reveal only Kuṣāṇa and Muslim ware and the rest seem to be of much earlier occupation.[24] Thus, there is no habitational trace in the post-Kuṣāṇa or Gupta and post-Gupta periods till the coming of the Muslims.

At Sanghol (Ludhiana district), only a thin occupational layer is noticed in the post-Gupta period. The Kuṣāṇa finds outnumber those belonging to the post-Kuṣāṇa period. The Gupta levels are comparatively thinner and lesser habitation is evident in the post-Gupta period. It is thus clear that decline set in at Sanghol in Gupta or post-Gupta times.[25]

The numismatic material noticed at Rupar suggests a decline at the site in the post-Kuṣāṇa times. Here were discovered the coins of Indo-Greeks, Audambara, Mathurā types in fair numbers along with a large hoard of over 600 coins, mostly Kuṣāṇa. Compared to this only one gold coin of Chandragupta I was found.[26]

Bara in Ambala district was bereft of Gupta deposits. The lowest datable layers here belong to the Kucāṇa period and the upper ones to medieval times.[27] Similarly at Ajaram (near Hoshiarpur), no post-Kusāṇa coins were found. The site yielded only the coins of Taxila, Indo-Greeks and the Kuṣāṇa kings.[28]

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[20] The account of Hsuan Tsang further confirms this dating. According to Marshall (*Taxila*, I, p. 348) the city where the Chinese pilgrim stayed was the city of Sirsukh. Since it was the third and the last of the city-sites at *Taxila* and was in utter ruins, it appears that its end took place towards the close of the 5th century A.D.

[21] S. Beal, *op. cit.*, Bk. III, pp. 148-62.

[22] *ASI-AR*, 1921-22, p. 92; *IAR*, 1961-62, p. 17; 1962-63, p. 9.

[23] [*sic*].

[24] *PIHC*, 1972, p. 93.

[25] *Ibid.*, p. 94.

[26] *IAR*, 1953-54, p. 7.

[27] *PIHC*, 1972, p. 94.

[28] *IAR*, 1969-70, p. 31.

In Haryana also several sites exhibit flourishing Kuṣāṇa layers, but poor habitational strata in the post-Kuṣāṇa period. At Raja-Karna-Ka-Quila (Kurukṣetra), the cultural deposits ranged in date from *c.* 400 B.C. to A.D. 300, but no post-A.D. 300 antiquities or structures were encountered here. It appears that after A.D. 300 the sites remained deserted till it was re-occupied in late medieval times.[29]

The archaeological evidence at Purana Quila (New Delhi) unmistakably indicates decline in the post-Kuṣāṇa and especially in the post-Gupta periods. Thus the Gupta structures were made of burnt bricks which were mostly taken out from earlier buildings.[30] Numerically also whereas the brick structures of the Kuṣāṇa period presented 4-5 phases, those belonging to the Gupta period showed only 3-4 phases.[31] Moreover, the antiquities from the site are relatively poor in the post-Kuṣāṇa phase. Whereas the Saka-Kuṣāṇa stratum yielded copper coins of Mathurā kings, Kuṣāṇas and Yaudheyas, bone dice of various types, terracotta figurines, pottery and crucibles,[32] the antiquities of the Gupta period include a sealing, a gold plaited coin of archer type, a terracotta figurine, a broken shell bangle, small damaged *mukhalinga* and some sealings.[33] The condition in the post-Gupta period is more disheartening. This period was represented only by a few structures, some with sagging walls, made of re-used bricks.[34] Thus there is clear evidence of decline after the Kuṣāṇas at Purana Quila and it is not before the "Rajput" period that we come across five structural phases of both re-used bricks and mud-bricks and a fortification wall, belonging perhaps to the time of the Tomaras, which was the most impressive structure.[35]

Noh in the district of Bharatpur, Rajasthan, shows flourishing condition in the Kuṣāṇa period, but there is no sign of habitation in the post-Kuṣāṇa times. The maximum range of Period V extended from about early 2nd century B.C. to late 3rd century A.D. Structures were encountered during this phase,[36] but no post-A.D. 300 antiquities or structures were noticed at Noh, which implies that the site remained unoccupied and witnessed a decline after the Kuṣāṇa period.

Similarly Bairat near Jaipur in Rajasthan has revealed the ceramics of the early centuries of the Christian era, but no Gupta remains. Period III which has been assigned to the early centuries of the Christian era is followed by Period IV which has revealed medieval glazed ware.[37] Hsuan-Tsang who visited this place and calls it *Po-Li-Ye-To-Lo* (Paryatra), noticed eight *saṁghārāmas*, most of which were in ruins and had very few priests.[38] Another ancient town, Nagara or Karkota Nagara, situated near Tonk in Rajasthan, was also ruined towards the and of the 4th or the beginning of the 5th century A.D.[39]

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[29] *IAR*, 1970-71, pp. 30-31; 1971-72. p. 204.

[30] *Ibid.*, 1969-70, p. 5; 1970-71, pp. 19-20.

[31] *PIHC*, 1972, p. 95.

[32] *IAR*, 1969-70, p. 5; 1970-71, p. 19.

[33] *Ibid.*, 1970-71, p. 20.

[34] *Ibid.*, 1969-70, p. 5.

[35] *PIHC*, 1972, p. 95.

[36] *IAR*, 1965-66, p. 38; 1971-72, p. 42.

[37] *Ibid.*, 1962-63, p. 31.

In Uttar Pradesh several sites have been excavated which pratically went out of habitation in the post-Kuṣāṇa period. Thus many sites in the districts of Meerut and Muzaffarnagar reveal that the red ware of the Suṅga-Kuāāṇa period is followed by mediaeval ware. Sites with similar features were explored in the districts of Saharanpur, Etah, Bulandshahr and Moradabad. No Gupta antiquities were noticed at Chakannagar Kheda Etawah district, although the site yielded sherds of PGW, NBPW and terracotta figurines belonging to the early centuries of the Christian era.[40]

Hastināpura in Meerut district remained inhabited from Period I to IV (pre-B.C. 1200 to the end of the 3rd century A.D.). The site remained deserted till the 11th century when it was re-occupied and this habitation lasted till the 15th century A.D.[41] Thus the site is bereft of Gupta antiquities or structures. But structures belonging to the earlier phase, a terracotta seal assigned to the late 2nd or early 3rd century A.D. and coins of the rulers of Mathurā, Yaudheyas, and imitation coins of the Kuṣāṇa king Vāsudēva were discovered here.[42] The archaeological evidence thus suggests that Hastināpura remained deserted in the Gupta and post-Gupta times till the early mediaeval period.

Kaseri, a rural site in the same district, also witnesssed a similar fortune. Here red ware of the Suṅga-Kuṣāṇa period was prominent, but there were fewer signs of habitation in the Gupta and post-Gupta periods.[43] The evidence from Kaseri is very important because it demonstrates that not only towns but some rural settlements also declined during this period.

Atranjikhera in Etah district is similarly devoid of Gupta antiquities. The ceramic industry of Period IV (c. 200 B.C.—A.D. 300) was dominantly red ware of medium fabric, assignable to the early centuries of the Christian era. Besides, burnt brick structures, two copper coins of Vāsudēva[44] and a coin mould[45] from the Kuṣāṇa layer were discovered here. But the habitational stratum of the Gupta period was not noticed despite the fact that sporadic at finds belonging to the Gupta period were noticed at Atranjikhera.[46]

Mathurā, a flourishing city under the Kuṣāṇas from where a large number of inscriptions belonging to this dynasty have been discovered, lost its prosperity with the decline in the Kuṣāṇa power in India, though the place continued to retain its

[38] S. Beal, *op. cit.*, Bk. IV, p. 179.
[39] *ASIR-Cunningham*, VI, p. 179.
[40] *PIHC*, 1972, p. 95.
[41] *AI*, nos. 10-11, p. 23.
[42] *Ibid.*, pp. 26, 101.
[43] *IAR*, 1969-70, p. 90.
[44] *Ibid.*, 1962-63, p. 36; 1960-61, p. 35.
[45] *PIHC*, 1972, p. 96.
[46] *IAR*, 1967-68, p. 46.

religious character. The place was visited both by Fa-hsien and Hsuan-Tsang according to whom the number of *saṁghārāmas* was twenty. According to the former it was the number of monks residing in them was 3000 and according to the latter 2000. Hsuan-Tsang also mentions about five *Dēva* temples, unnoticed by Fa-hsien. But none of the Chinese pilgrims notices various arts and crafts that thrived under the Kuṣāṇas. Fa-hsien merely says that "...the people are numerous and happy...." Hsuan-Tsang observes that the people "give principal care to the cultivation of *An-mo-lo* (trees)...the country produces a fine species of cotton fabric and also yellow gold...."[47] This may imply that the prosperity of Mathurā was already on the wane when the Chinese pilgrims visited it.

The decline of Mathurā in the post-Kuṣāṇa period is indicated also by archaeological evidence. Period III which represents the Kuṣāṇa phase, revealed important antiquarian remains like the beads of semi-precious stones, Kuṣāṇa and other coins and terracotta figurines which compare well with those discovered from Ahichchhatra, belonging to period A.D. 100-350.[48] Although Gupta terracottas were discovered during the last occupational phase, no structures were noticed.[49] Moreover, the stratigraphic evidence at Mathurā compares well with the epigraphic material. Whereas 68 Saka-Kuṣāṇa inscriptions were noticed here, those belonging to the Gupta period are negligible in number.[50]

At another site, Sonkh, in Mathurā district, the Kuṣāṇa level showed a prosperous phase. Structural remains belonging to the Kuṣāṇa period, 112 Kuṣāṇa copper coins (Huviṣka 2, Vāsudēva I or Kaniṣka III 110) and stone plaques with typical Kuṣāṇa features were noticed here.[51] But the structures of the Gupta period were built of re-used Kuṣāṇa bricks and were poor in appearance. Few Gupta antiquities, i.e., an unburnt clay seal inscribed in Gupta characters, a terracotta relief and a small Gupta Viṣṇu image of sandstone are mentioned but no Gupta coins are reported from the site.[52] The place seems to have been deserted in the post-Gupta period to be re-occupied in the 9th century A.D.[53]

Manwan, in the district of Sitapur, which remained inhabited from *c.* 500 B.C. to mediaeval times, was abandoned in the post-Gupta period and was not occupied again before the coming of the Muslims. This is suggested by the discovery of structures and pottery of the NBP phase, Suṅga-Kuṣāṇa pottery, terracotta sealings in Brāhmi characters, terracotta figurines of the Gupta period, but complete absence of either structures of antiquities between the post-Gupta and Muslim periods.[54]

The Kuṣāṇa stratum (A.D. 100-350) at Ahichchhatra, in Bareilly district,

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47. S. Beal, *op. cit.*, Bk. IV, pp. 179-80; James Legge, *op. cit.*, pp. 42. 43.
48. *IAR*, 1954-55, pp. 15-16.
49. *Ibid.*, p. 16.
50. *PIHC*, 1972, p. 96.
51. *IAR*, 1969-70, p. 42.
52. *Ibid.*
53. *Ibid.*, 1968-69, p.
54. *Ibid.*, 1969-70, p. 44.

represents the most prosperous period of building activity. It was also "marked by strongly individual features in pottery and showed more innovations in types and decoration than any single one of the preceding or succeeding levels". But the site seems to have lost its prosperity after the Kuṣāṇas despite the fact that terracotta figurines of gods and goddesses belonging to the Gupta and post-Gupta times were discovered here.[55]

Long ago Cunningham had suggested that "the great decline of Srāvastī must have taken place during the 4th century A.D. and it may be connected with the fall of the Gupta dynasty in A.D. 319 (?)".[56] The date of the fall of the Gupta empire in A.D. 319 as given by Cunningham is not acceptable, but we may accept his contention that Srāvastī, which was a flourishing city in the Kuṣāṇa period, declined in the Gupta period and lost its importance as the prime city of the Kosalan kingdom, though it continued to exist as a religious centre up to the 12th century A.D.[57] The accounts of the Chinese pilgrim also confirm this conclusion. Fa-hsien observed that in the city of Srāvastī "the inhabitants were few and far between, amounting in all (only) to a few more than two hundred families . . . ."[58] Later on Hsuan-Tsang also noted that the chief town of *Shi-Lo-Fu-Shi-Ti* (Srāvastī) is "deserted and ruined . . . ."[59]

Bhita, near Allahabad, certainly witnessed a decline in post-Gupta times. Although the site has yielded predominantly seals and sealings belonging to artisans and merchants of the Gupta period, the structures are comparatively poor in this phase than those of the earlier ones. Marshall, during the course of excavations, noticed poor and mutilated constructions of the Gupta period.[60] He suggests that some of the houses were hurriedly excavated due to some catastrophe in the Kuṣāṇa period as may be inferred from coins and other objects lying on ground as well as by subsequent accumulation of debris in rooms and courts.[61] The second desertion which occurred during the early Gupta period was also precipitate and was caused by an attack on the city. This is borne by the discovery of many missiles noticed in houses and lanes, the burnt condition of the houses and the sacred images found *in situ*.[62] As far as numismatic evidence is concerned, whereas 17 copper coins of Kaniṣka and Huviṣka were discovered,[63] no Gupta coin was found. Thus it is reasonable to suppose that decline set in at Bhita during post-Kuṣāṇa times and that whatever habitation may have been there was very poor. In course of time the site lost its commercial importance which it enjoyed in the Kuṣāṇa and Gupta periods.

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55. *AI*, no. 4, pp. 126-34.
56. *ASIR-Cunningham*, I, pp. 332-33.
57. *MASI*, no. 50, pp. 30-31.
58. J. Legge, *op. cit.*, ch. XX, pp. 55-61.
59. S. Beal, *op. cit.*, Bk. VI, pp. 1-13.
60. *ASI-AR*, 1911-12, p. 30.
61. *Ibid.*, p. 34.
62. *Ibid.*
63. *Ibid.*

The large scale excavations at Kauśāmbī confirm the general cultural sequence during the post-Kuṣāṇa and Gupta times. This place is also comparatively rich in Kuṣāṇa relics, Gupta remains being unimpressive. It appears from the structural remains that the site was under occupation from the middle of the 4th century B.C. to the first quarter of the 4th century A.D. (SP I to VIII).[64] The Sub-Period VII (A.D. 175-250) was however devoid of Kuṣāṇa coins and only the coins of the Maghas, who succeeded the Kuṣāṇas at Kauśāmbī, were noticed. The last coin issues found at the site were those of Ganendra or Ganapatinaga, in layer I, only 4 inches below the present surface. It becomes clear, therefore, that by the time of the deposition of this coin, the occupational layer VIII had been destroyed and deserted. This inference is further corroborated by the complete absence of antiquities relating to the early Gupta period at Kauśāmbī. The site was therefore "not in occupation even during the rule of the early Gupta monarchs".[65] It may also be pointed out that Hsuan-Tsang also describes Kauśāmbī as being full of ruins. In his own words, "there are ten *saṁghārāmas*, which are in ruins and deserted. . .within the city at the south-east angle of it, is an old habitation, the ruins of which only exist . . . . There are also ruins of Tathāgata's bathing house . . . ."[66] All this suggests a decline at Kauśāmbī in the post-Kuṣāṇa period.

Piprahwa, which according to K.M. Shrivastava represents the ancient city of Kapilavastu, witnessed a decline after the Kuṣāṇa period. This clearance at the site brought to light massive structures belonging to the Kuṣāṇa period, but no Gupta antiquities or structures were found. Moreover, on the basis of the occurrence of a spout of red polished ware, the last but one phase has been assigned to A.D. 200-300.[67] In view of this the ancient city of Kapilavastu seems to have remained uninhabited during the Gupta period.

The archaeological evidence at Kapilavastu is fully confirmed by the accounts of the Chinese pilgrims. Fa-hsien noticed that "there was neither king nor people in Kapilavastu. All was mound and desolation. Of inhabitants there were only some monks and a score or two of families of the common people . . . the country of Kapilavastu is a great scene of empty desolation. The inhabitants are far and few between. On the roads, people have to be on their guard against white elephants and lions and should not travel incautiously".[68] Almost similar impression is left by Hsuan-Tsang. He notes that "there are some ten desert cities in this country, wholly desolate and ruined. The capital is overthrown and in ruins . . . . It has long been deserted. The peopled villages are few and waste. There is no supreme ruler, each of the towns appoints its own ruler . . . . There are 1000 or more ruined *saṁghārāmas* . . . within the royal precincts are some ruined foundation

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64. *MASI*, no. 74, p. 21. However, at another place, the occupational date of Kauśāmbī is suggested as 1165 B.C. to A.D. 580. See G.R. Sharma, *op. cit.*, p. 22.
65. *Ibid.*, p. 20.
66. S. Beal, *op. cit.*, Bk. V, pp. 235-36.
67. *IAR*, 1970-71, p. 37.
68. J. Legge, *op. cit.*, ch. XXII, pp. 64-68.

walls . . . ."[69] Thus both literary and archaeological evidence indicates the desertion and ruin of Kapilavastu in the post-Kuṣāṇa period.

The archaeological evidence at Ayodhya indicating its cultural sequence is meagre,[70] but it appears from the accounts of Fa hsien that the city still continued to exist. Hsuan-Tsang, however, came across some ruined foundation walls, ruins, of a *saṁghārāma*, old foundation walls and the ruins of the preaching hall of Asanga.[71] On the basis of these accounts it may be suggested that decline had not set in at Ayodhya in the Gupta period but it certainly witnessed bad days during the post-Gupta period.

An earlier excavation at Rajghat, near Banaras, revealed that as far as structural remains are concerned, the Kuṣāṇa period was the most flourishing period at the site.[72] Subsequent excavations also give more or less a similar impression. The Period III (*c.* 2nd-4th century) A.D.[73] at Rajghat represented the most prosperous phase of the site.[74] Although the massive brick constructions noticed in Period III continued in Period IV (A.D. 300-700), structures ceased to be built after Period V.[75] Some Kuṣāṇa coins are also reported[76] but no Gupta coin is mentioned. All this suggests poor habitation in the Gupta period and possible desertion of the site in post-Gupta times.[77]

At Mason Period III (A.D. 100-200), representing the Kuṣāṇa period, is richer in structures and antiquities than Period IV (A.D. 200-600). Here the Kuṣāṇa level exposed brick structures, brick floorings, drain, road, typical Kuṣāṇa terracotta figurines, Kuṣāṇa coins, seals, sealings, beads and other objects.[78] Although Period IV also yielded structures, they were poorly built in which re-used bricks from earlier constructions were utilized. Silver and copper coins and other antiquities are also reported from this phase, but no Gupta coin was found. Most probably the site was deserted after Period IV.[79] Similarly, no sign of habitation is noticed in Gupta period at Sohgaura.[80]

In Bihar, almost all the excavated urban sites except Champā, belonging to the time of the Kuṣāṇas present a picture similar to what has been noticed in Uttar Pradesh, Haryana, Panjab and elsewhere. Thus Chirand, near Chapra, which seems to be a flourishing town in the Kuṣāṇa period, was deserted in post-Kuṣāṇa

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69. S. Beal, *op. cit.*, Bk. VI, pp. 13-14.
70. *IAR*, 1969-70, p.
71. S. Beal, *op. cit.*, Bk. V, pp. 224-29.
72. *ABIHI*, III (1940), p. xlii.
73. *IAR*, 1957-58, p. 50. However, at another place the date of the Period III is given as extending from the beginning of the Christian era to about A.D. 300. *Ibid.*, 1960-61, p. 38.
74. *Ibid.*, 1964-65, p. 45.
75. *Ibid.*
76. *Ibid.*
77. *PIHC*, 1972, p. 98.
78. *IAR*, 1964-65, pp. 42-43; 1965-66, pp. 51-52; 1967-68, p. 47; 1970-71, p. 76.
79. *Ibid.*, 1967-68, p. 47.
80. *PIHC*, 1972, p. 98.

times and settlement started here only during the Muslim period. The site has yielded immensely rich material belonging to the Kuṣāṇa period in the shape of structures, pottery, terracotta, beads, metal objects and a hoard of 88 copper coins.[81] But compared to this, Gupta structures and antiquities are negligible. Even though the site remained in partial occupation during the Gupta period, it definitely lost its significance after the Guptas.

Vaiśālī was another important town in north Bihar which witnessed a similar fate. Several excavations at the site have brought to light rich antiquarian remains and imposing structures of the Kuṣāṇa period. Gupta structures and seals, sealings, pottery and terracotta were also discovered here, but they appear to be comparatively poor. Period III (*c.* A.D. 100-300) at Vaiśālī, was the most prosperous one, but Period IV (*c.* A.D. 300-500)[82] showed signs of poor habitation. Generally speaking, the constructions of Period IV were made of re-used bricks and were flimsy in nature.[83] Moreover, the Gupta coins are conspicuous by their absence at Vaiśālī. This perhaps "reflects the negligence of the Gupta officials in this region" or else it suggests that "the administrative hold of the Guptas over Vaiśālī may have been weak".[84] All this suggests that although Vaiśālī remained inhabited and formed one of the district headquarters under the Guptas, it lost its earlier prosperity. The further decline of Vaiśālī in the post-Gupta period is indicated by the occurrence of pre-Mughal glazed ware in Period V (post-A.D. 600).[85]

Archaeological evidence relating to Vaiśālī is corroborated by the account of Hsuan-Tsang. He observed that "the capital city of *Fe-She-Li* (Vaiśālī) is to a great extent in ruins . . . . There are several hundred *saṁghārāmas* which are mostly dilapidated . . . . The royal precincts are about 4 or 5 *li* : there are a few people living in it . . . . Both within and without the city of Vaiśālī, and all round it the sacred vestiges are so numerous that it would be difficult to recount them all. At every step commanding sites and old foundations are seen, which the succession of seasons and lapse of years have entirely destroyed. The forests are uprooted; the shallow lakes are dried up and stinking; nought but offensive remnants of decay can be recorded".[86] Thus both archaeology and literature indicate the ruin of Vaiśālī in the post-Gupta period.

The towns situated south of Ganga in Bihar also give a general impression of decline and decay. At Buxar three cultural horizons have been noticed, of which earlier two were continuous while the third came after a long period of desertion. Period I of the site showed predominantly NBPW, whereas Period II revealed ceramics of the early centuries of the Christian era. But after the second period a heavy flood in the Ganga washed away nearly the entire habitational area and the

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81. *IAR*, 1962-63, p. 6; 1964-65, p. 7; 1968-69, p. 6; 1970-71, pp. 13-14. See also chart on Chirand.
82. Krishna Deva and V.K. Mishra, *op. cit.*, p. 3.
83. *Ibid.*, pp. 13-15. See also B.P. Sinha and S.R. Roy, *op. cit.*, P. 133.
84. B P. Sinha and S.R. Roy, *op. cit.*, p. 132.
85. *Ibid.*, p. 40.
86. S. Beal, *op. cit.*, Bk. VII, pp. 66-73.

site remained deserted till the mediaeval period when it was resettled.[87] Similarly, no post-Kuṣāṇa antiquities are reported from Sonpur (Gaya). The site remained occupied from *c.* 1100 B.C. to A.D. 200. Period III (200 B.C.-A.D. 200) was the most prosperous period of the site after it was abandoned for ever.[88] Similarly the Asura site at Saradkel in Ranchi district which has yielded Kuṣāṇa structures and antiquities[89] went out of ocupation in the post Kuṣāṇa period.

Archaeological evidence and travel account of Hsuan-Tsang suggest poor habitation at Pāṭaliputra in the Gupta period and the abandonment of the city in the post-Gupta period. Almost every excavation conducted at Kumrahār and its vicinity suggests that decline set in here in post-Gupta times.[90] As early as 1913-14 Spooner noted several instances of remains of Gupta structures sagging downwards.[91] Subsequent excavations brought to light evidence which corroborates this conclusion. Altogether six cultural periods, ranging in date from about 150 B.C. to the 17th century were exposed. But after Period VI (A.D. 450-600) there was no habitation at Kumrahār for several centuries. The next occupational stratum represented by Period VI belonged to the 17th century.[92] During a later excavation three habitational phases were discovered. On these the first two (600 B.C,-150 B.C., 150 B.C.-A.D. 500) were continuous,whereas the third one followed after a long habitational gap.[93] This suggests that the city remained occupied up to the Gupta period after which it was abandoned to be re-inhabited not before the 17th century. But even this occupation was not complete and habitational spread in other directions, the result being that until some years ago, the ancient site of Kumrahār presented a deserted look. This area was almost cut off from other Mughal and English settlements at Patna. This implies some terrible catastrophe at the site which either wiped out the population or compelled the people to settle elsewhere.

It may also be pointed out that although Pāṭaliputra remained inhabited under the Guptas, it had lost its earlier prosperity as can be inferred from the Gupta structures and antiquities which are poorly represented. A hoard of 52 copper coins and a golden amulet imitating Kuṣāṇa coins are reported from Pāṭaliputra, but only few coins of Chandra-gupta II were found here.[94] Similarly, whereas Periods IV and V yielded 22 and 11 beads of semi-precious stones respectively, Period III, apparently covering the Kuṣāṇa phase, exposed 43 such beads.[95] It is also evident that the structures belonging to Period IV were of fragmentary and dilapidated

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87. *IAR*, 1965-66, p. 11.
88. B.P. Sinha and B.S. Verma, *op. cit.*, p. 13.
89. *IAR*, 1964-65, p. 6.
90. For details see *ASIR—Cunningham*, XI, pp. 153-4; *AR—ASI*, 1912-13, p. 77; *AR—ASI—EC*, 1912-13, pp. 57-8. 1913-14, passim; L.A. Waddell, *Report on the Excavations at Pāṭaliputra* (Reprint), Delhi, 1975, passim.
91. *AR—ASI—EC.*
92. A.S. Altekar and V.K. Mishra, *op. cit.*, p. 19.
93. B.P. Sinha and L.A. Narain, *op. cit.*, p. 14.
94. A.S. Altekar and V.K. Mishra, *op. cit.*, p. 20.
95. *Ibid.*, p. 132.

nature.[96] The later excavation conducted by Sinha and Narain also revealed that the structures belonging to Period III were flimsy and made entirely of brick-bats. The materials used in the structures show poor economic condition of the people.[97] Moreover, the total absence of material relics after A.D. 500 suggest sharp decline in the economic status of the inhabitants of Pāṭaliputra towards the end of the Gupta period. When Hsuan-Tsang visited this city he found it deserted, only the foundation walls of the city survived. The *saṁghārāmas*, Dēva temples, and *stūpas* were many, but in ruins.[98] Fa-hsien, however found the inhabitants of the city of Pāṭaliputra to be "rich and prosperous...[99]" The accounts of the Chinese pilgrims suggest that the period intervening between the visit of Fa-hsien and Hsuan-Tsang witnessed a rapid decline at Pāṭaliputra and when the latter came to this place it had "already been deserted".

The available evidence thus indicates that most of the towns which thrived during the Kuṣāṇa period presented a decadent look in post-Kuṣāṇa times. Some of these towns were abandoned in the post-Kuṣāṇa period itself, while others show poor habitation in the Gupta period and went out of occupation in the post-Gupta period. This applies to almost every town in northern India, the few exception being Kanauj, Ahichchhatra and Nalanda.[100] Of these only Ahichchhatra has yielded Kuṣāṇa antiquities. Both Kanauj and Nalanda were out of Kuṣāṇa influence. Thus the decline of town in post-Kuṣāṇa and Gupta periods is an archaeological truth.

Similary in western India and the Deccan the towns which flourished on account of Indo-Roman trade declined as soon as this trade diminished. For example, at Sisupalgarh, an ancient town of Orissa which yielded some Kuṣāṇa coins, three cultural phases were noticed. The easly period I (300-200 B.C.) was the formative stage; the early middle Period IIA (200 B.C.—A.D. 100) witnessed the full growth of the culture at Sisupalgarh, marked by the occurrence of 'rouletted' ware, but the late middle Period IIB (A.D. 100-200) shows decline and transition. During the late period III (A.D. 200-300) the ceramic industry as well as the layout of the structures changed considerably.[101] No structures of antiquities going

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96. A.S. Altekar and V.K. Mishra, *op. cit.*, p. 40.
97. B.P. Sinha and L.A. Narain, *op. cit.*, p. 16.
98. S. Beal, *op. cit.*, Bk. VIII, pp. 82-6.
99. J. Legge, *op. cit.*, ch. XXVIII, pp. 77-9.
100. *PIHC*, 1972, p. 100.
101. *Journal of the Andhra Historical Research Society*, XIX, pp. 149-50. See also *AI*, no. 5, pp. 67-72.
102. Several examples of decadent urban centres from the Deccan in the post-Kuṣāṇa period are available. Thus at Brahmapuri (Kolhapur) the habitation ended in the post-Satavahana period (200 B.C.—A.D. 200) and the site was reoccupied under the Bahmanis. See H.D. Sankalia and M.G. Dikshit, *op. cit.*, p. 40. Period III (A.D. 100-500) at Maheshwar and Navadatoli was followed by a period of desertation until the site was reoccupied in the Muslim period. H.D. Sankalia and others, *Report on Excavations at Maheshwar and Navadatoli*, Poona, 1958, p. 20. Similarly Period VI (50 B.C.—A.D. 200) at Nevasa was followed by Period VI (A.D. (Contd.)

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beyond this date were noticed at Sisupalgarh, which implies that that the occupation at the site came to a close towards the end of the 4th century A.D.[102] Thus the decay of urban centres in the post-Kuṣāṇa period seems to be a widespread phenomenon and was not confined to northern India alone. Some of the prosperous towns of the Kuṣāṇa period which declined in the post-Kuṣāṇa times were revived later, but most of them lost their identity completely.

Causes of the Decline of Towns

The sudden decline in the urban centres needs investigation. To us it appears that the same factors which had accelerated the process of urbanization in the early centuries of the Christian era,[103] account for the decline and disappearance of towns in the post-Kuṣāṇa period. These were mainly political, social, economic and religious factors. We may also add that natural calamities, change in the course of rivers on which towns were situated, large scale deforestation, raids and plunders of towns, are some of the factors which may explain the rapid decline of towns during the period under discussion. The causes may be divided into the following heads :

(a) natural
(b) political
(c) religious
(d) economic

Each of these factors seems to have contributed to the reversal of urban trend in India.

(a) *Natural Causes*

The literature of ancient India is replete with references to natural calamities like flood, drought, famine, epidemic, etc., which might have led to the shift of population from one place to another and thus helped the decay of urban or rural settlements. As early as the 4th century B.C., Megasthenes observed that famine

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1400-1700) after a long gap. *Idem.*, *From History to Pre-History at Nevasa*, Poona. 1960, p. 64. The excavations of other sites like Nasik and Jorwe, Devnimori, Shamalaji, Ter, etc., suggest that decline set in at these sites in the 3rd to 5th centuries of the Christian era. See H.D. Sankalia and S.B. Deo, *Report on the Excavations at Nasik and Jorwe (1950-51)*, Poona, 1955, p. 27; R.N. Mehta and S.N. Chaudhary, *Excavations at Devnimori*, Baroda, 1966, p. 27; R.N. Mehta and A.J. Patel, *Report on Excavations at Shamalaji*, Baroda, 1967, p. 6; B.N. Chapekar, *Report on the Excavations at Ter* (1958), Poona, 1969, p. IV. Similarly, the excavations conducted by the Italian Archaeological Mission in Pakistan, the Kyoto University Archaeological Mission at several Kuṣāṇa sites in Pakistan and Afghanistan, the third excavation by the Afghan Archaeological Mission at Kohi-Mori near Kapisa and serveral excavations in central Asia suggest that many sites, which flourished in the Kuṣāṇa period, declined after the eclipse of the Kuṣāṇa empire. See *CAKP*, I, pp. 134-79; ibid., II, passim. *AHCO*, XX, no. 4 (1968), p. 68.

[103] See ch. I.

never visited India,[104] but the *Arthaṣāstra* of Kauṭilya explicitly mentions calamities like famine, flood, fire, etc. The Epics, the Buddhist literature and the *dharmasāstras* also refer to these calamities.[105] In the *Jātakas* there are several references to the miseries brought about by fire, storm and plunder and to the destruction of towns.[106] The *Gijjhā Jātaka* even mentions vultures plundering a city.[107] The *Mahavastu* refers to plague and natural calamities which might have often destroyed settlements. The text also mentions two types of diseases caused by demoniac agency, *maṅḍālaka* and *adhivāsa*. When the plague known as *maṅḍālaka* attacked a family it left no one alive and the second one destroyed every living being in a district. Once the famous city of Vaiśāli was infested by the *adhivāsa* type of plague in which many persons died.[108] Other cities like Kampilla, Mithila, Videha and Rajagriha were also affected by plague.[109] The *Mahavastu* even refers to earthquake. At one place we are told that the system of the three thousand worlds trembled and quaked six times.[110]

The *Divyāvadana*, another Buddhist text, refers to three kinds of famines, *chanchu*, *svetāṣthi* and *salākavrithi*. In the first one, people survived on grains which were collected in a box for the appeasement of the dead. In the second type of femine people prepared the bone-soup and drank it. In the third type of famine, grains add molasses hidden in holes were taken out with the help of sticks, were boiled with large amount of water and the soub, thus prepared was consumed by the famine stricken people.[111] Some times famine was so severe that people were compelled to eat even the flesh of their children.[112] All this suggests that natural calamities often changed the fate of settlements and people alike, as they do even in modern times. Although we have no archaeological evidence to support the above literary references, we cannot brush them aside as mere literary exaggerations.

The effects of flood can be noticed at many excavated sites. The habitation at Saikhan Dheri shrank considerably due to flood during the latest occupational phase. In some of the cuttings in western section here, thick deposits of alluvial clay and sand were noticed which implies that the flood water entered up to that point. The flood at Saikhan Dheri was so recurrent and devastating in nature that the entire population shifted to a new city, Rajar, during the reign of Vāsudēva, which led to the desertion of Saikhan Dheri towards the end of the 2nd or the 3rd century A.D.[113]

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104. Y. Mishra, *Megasthenes Kā Bhārat Vivaraṇ* (in Hindi), p. 5.
105. For details see A.N. Bose, *op. cit.*, pp. 129ff; D.R. Das, *Economic History of the Deccan*, Delhi, 1969, pp. 116-9.
106. *Jātaka*. I. 36, 41, 75, 95, 124, 137; II. 199, 204, 213, 276; III. 360, 429, 477; V. 512, 526, 547.
107. *Ibid.*, II. 164.
108. J.J. Jones (tr.), *op. cit.*, I, SBB, p. 208.
109. *Ibid.*, pp. 236-40.
110. *Ibid.*, p. 34.
111. B.N. Puri, *India Under the Kuṣāṇas*, Bombay, 1965, p. 114.
112. E.H. Johnston (ed. & tr.). *The Saundarānanda of Asvaghoṣa*, Motilal Banarsidass, Delhi, 1975 (Reprint), XIV. 13.
113. *AP*, II, pp. 23ff.

The evidence of natural calamities affecting the fortunes of towns in Punjab and Haryana is scanty, but the possibility of rivers often changing their courses and thus bringing miseries to towns cannot be ruled out. At Sanghol, for example, erosion marks are clearly visible in the moats of the defence complex (assigned to the 2nd half of the 1st century to the 5th century A.D.). This suggests that sometimes floods must have adversely affected the habitation at Sanghol.

The evidence of flood is also available at Hastināpura, though it belongs to a much earlier period. During Period II (*c.* 1100-800 B.C.) the settlement was washed away by flood in the Ganga.[114] This might have happened in later times as well. Moreover, at present the river Ganga flows nearly at a distance of five miles from the excavated mounds which were earlier very close to it. This indicates that there was a shift in the course of river over years which possibly compelled the people to desert the city as is lost the advantages of being situated on a river bank.

Similarly at Atranjikhera the effects of flood were noticed in PGW and NBPW phases.[115] The ancient city of Srāvastī also might have been destroyed by the ravages of the river Rāpti.[116] The Pāli legends record regretfully that 18 crores of money hoarded on the bank of Achirāvati by Anthapindika, a rich merchant of Srāvastī, was swept away on account of heavy flood in that river.[117] This suggests that some time the city of Srāvastī had to face a turbulent flood which destroyed considerable part of the city and swept away its wealth.

The possibility of flood having destroyed partially or completely the ancient cities of Kausāmbi, Bhita and Rajghat, cannot be ruled out. Situated on river banks these cities must have been susceptible to flood and may have been abandoned in course of time.

In Bihar, the effects of flood can be traced at Chirand, Vaiśālī, Buxar and Pāṭaliputra. A glance at the present mound of Chirand makes it clear that a large portion of the mound has been continually eroded by the river. The fact that a good number of pottery pieces and other antiquities can still be picked up from the river-bed, suggests that the habitation at Chirand ended due to the large scale erosion of occupational area by the river.

Some indirect evidence of flood was noticed at Vaiśālī. Here some structures were found sealed, possibly by a flood deposit.[118] Moreover, frequent changes in the river beds[119] might have caused the desertion of the city of Vaiśāli.

The ravages of flood can be noticed at Buxar also. The site was inundated some time after Period II by the Ganga water which washed away a major portion of the habitational area and the place was soon abandoned thereafter.[120]

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114. *AI*, nos. 10-11, p. 14.
115. *IAR*, 1968-69, p. 37.
116. *ASIR—AR*, 1907-8, pp. 89-90.
117. *MASI.* no. 50, p. 31.
118. B P. Sinha and S.R. Roy, *op. cit.*, p. 6.
119. Yogendra Mishra and S.R. Roy, *A Guide to Vaiśālī and tho Vaiśālī Museum*, Vaisali, 1964, p. 14.
120. *IAR*, 1965-66, p. 11.

Buddha, while passing through Pāṭaliputra, is said to have remarked that "among all places where the Aryans reside; among all trade routes (*vanipattho*), this Pāṭaliputra will become the *puṭabhedana* and the *agganagara*. But there shall be three dangers of *Pāṭaliputra*, that of fire, that of water and that of dissension".[121] Of these three factors, the role of at least fire and water may be supported by archaeological evidence.

The ancient city of Pāṭaliputra, surrounded as it was by four rivers, the Ganga, Sone, Gandak and Punpun;[122] was susceptible to the vagaries of flood. The city seems to have been destroyed by some horrible flood in the second half of the 6th century A.D.[123] Cunningham, on the basis of a Chinese account, suggests that "about A.D. 756 the bank of the river *Ho-lung*, the Ganges, or perhaps the *Hiraṇaya Vāha* or Sone, gave way and disappeared". According to him this account refers to Pāṭaliputra.[124] The river bank may have given way on account of flood and not earthquake as has been suggested.[125] This is clear from the fact that whereas archaeological excavations have brought to light signs of fire and flood at Pāṭaliputra there is nothing tangible to suggest that it was ever visited by an earthquake.

On the other hand, there is sufficient evidence to show that Pāṭaliputra was constantly visited by flood. Spooner, who excavated the site of Kumrahār, noted that in the early centuries of the Christian era the buildings standing on the site were flooded, but he could not ascertain how long this flood continued.[126] Waddell also suggested the possibility of the place having been destroyed by flood.[127] Moreover, the sand and mud of the Sone in the southern suburbs of Patna and that of the river Punpun was noticed at Kumrahār during the excavations of 1951-55.[128] A later Jaina work, *Titlhogali Painniya*, informs us that due to heavy rains for complete 17 days and nights both the Ganga and the Sone swelled and began to overflow. The flood water engulfed the entire city and washed away several monks and laymen. Only a few could save their lives.[129] All this suggests that flood was a major factor in the destruction of Pāṭaliputra. Moreover, the shift in the course of the Ganga also must have contributed considerably in the ruin of this city.

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[121] T.W. Rhys Davids (tr.), *Dighā Nikāya*, 3 vols., SBB, II. 128.

[122] Waddell, however, suggests that Pātiliputra was situated at or near the confluence of all the five great rivers of Mid-India, the Ganga, the Gogra, the Rapti, the Gandak and the Sone. *Report on the Excavations at Pāṭaliputra* (1903), Delhi, 1975 (Reprint), p. 2. But this statement is misleading.

[123] *PIHC*, 1975. pp. 56-7.

[124] *ASIR—Cunningham*, XI, pp. 155-6. However no traces of flood could be detected in the Hall area during the excavations of 1951-55. See A.S. Altekar and V.K. Mishra, *op. cit.*, p. 38.

[125] *PIHC*, 1975, p. 52.

[126] *AR—ASI—EC*, 1912-13, p. 57.

[127] Waddell, *op. cit.*, p. 8.

[128] *PIHC*, 1975, p. 58.

[129] Quoted in A.S. Altekar and V K. Mishra, *op. cit.*, p. 12; B.P. Sinha and L.A. Narain, *op. cit.*, p. 5. It has also been suggested that plague (Waddell, *op. cit.*, p. 8) and superstitions (*AR—ASI*, 1912-13, p. 78; *AR—ASI—EC*, 1913-14, p. 59) might have also helped the destruction of Pāṭaliputra.

(b) *Political Causes*

The archaeological and numismatic data confirm that by the beginning of the A.D. 4th century, the Kuṣāṇas had lost most of their territories and were reduced to a small ruling dynasty. This led to the replacement of the Kuṣāṇa currency by imitations or indigenous coins. The Kuṣāṇa power suffered considerably on account of the rise of local chiefs and republican states like the Yaudheyas, Kunindas, Arjunayanas, the Nagas of Padmavati and the Malavas of Rajaputana, and the Sassanian invasion in north-western India. The downfall of the Kuṣāṇas disturbed the peace and stability in the land, ultimately hampering industrial and commercial activities. Neither trade nor industry could thrive in a chaotic condition. Agriculture was also adversely affected which must have diminished surplus production and proved fatal to the existence of urban centres.

(c) *Religious Factor*

Kuṣāṇa towns in India received a rude shock at the hands of the Huṇas, especially Mihirakula who was a devout Saivite. From the accounts of Yuan Chwang it appears that this Huṇa leader initially showed his interest in Buddhist theology and asked a Buddhist clergy to send him a teacher; but the clergy insulted Mihirakula by recommending the name of a servant of his own household. This enraged him and he "forthwith ordered the extermination of the Buddhist Church throughout all his dominions".[130] Many towns e.g., Puṣkaḷavati, Taxila, Mathurā, Srāvastī, Kausāmbi, Sarnath, Vaisāli, Pāṭaliputra, etc., which flourished as Buddhist centres, were ravaged, plundered and brought to ruin. The evidence of conflagration noticed at some of these places indicates that they were destroyed by the Huṇas.

The evidence of fire was noticed at Saikhan Dheri,[131] though it is not clear how this fire took place. But at Taxila the remains of charred timber, iron clamps, nails and other fittings, and heap of half-burnt wheat noticed in *Court H* and *Cell 8* of the Dharmarājikā,[132] Jaulian[133] and Bhamala[134] suggest the destruction of these monasteries at the hands of invaders, presumably Huṇas. Similarly the skeletons with wound marks and arrowheads with four barbed blades noticed in the monastic establishments of the Dharmarājikā, Kuṇala and Mahrā Morāḍu suggest the destruction of these monasteries by the Huṇas.[135]

Maṇikayāla is another site in the north-west which seems to have been destroyed by fire. Considerable quantity of charcoal and ash was found in the ruined buildings. The wall of the monastery had been blackened and wrought block of *kankar* had been converted into lime as a result of large scale fire.[136] We also know from the accounts of Hsuan-Tsang that the *stūpa* built by Kaniṣka at Peshawar was destroyed by fire several times and one such incident had taken place a few years before the pilgrim's visit.[137] We may attribute this fire and destruction to the Huṇas who had also brought about the ruin of monasteries at Taxila. Maṇikayāla might also have been subjected to similar vandalism.

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[130] T. Watters (ed. Rhys Davids & Bushell), *op. cit.*, p. 288.

[131] *AP*, II. p. 29.

[132] J. Marshall, *op. cit.*, I, p. 285.

[133] *Ibid.*, p. 387.

[134] *Ibid.*, p. 395.

[135] *Ibid.*, I, pp. 266ff; II. pp. 547-9.

The evidence of fire and destruction is available at other sites also. Thus during the last sub-period at Kausāmbi buildings were burnt down and dismantled.[138] Moreover, the barbed arrowheads, similar to these found at Taxila,[139] and a seal of Toramana[140] discovered from Kausāmbi is indicative of the fact that the Huṇas invaded and destroyed the monastic complexes at Kausāmbi.

At Bhita also the excavations made it clear that the city was attacked by some hostile invaders during the Gupta period. Missiles like catapult and sling balls were found scattered in houses and lanes. Even some of the houses were burnt completely.[141] This attack may be assigned to the Huṇa leader Toramana who completely destroyed this city.

The monastery at Kasia witnessed a similar fate at the hands of the Huṇas. Vogel noticed here coins of Kaniṣka mixed with charred substance.[142] Kasia, which flourished as a famous Buddhist centre with its *nirvāṇa stūpa*, must have been the target of the Huṇa attack.[143]

Almost every excavation carried out near Sarnath has revealed the traces of fire-charred timber and half-burnt grain were noticed by Cunningham. Major Kittoe told Cunningham, "all has been sacked and burnt, priests, temples, idols, all together. In some places bones, iron, timber, idols, etc. are all fused into huge heaps; and this has happened more than once".[144] The destruction of Sarnath seems to have been sudden and unexpected because remains of ready-made wheaten cakes were found in one of the chambers of the monastery. Although these is no positive evidence to suggest that Sarnath was destroyed by the Huṇas, the fact that it was one of the most important Buddhist centres makes us believe that it must not have been spared by them.

The ancient cities of Vaisāli and Pāṭaliputra also seem to have been largely devastated by fire. T. Bloch's excavation at Vaiśāli brought to light evidence suggesting the sack and plunder of the place. The earth was found to have been mixed up with huge amount of pottery and bones. Heaps of ashes and pieces of

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136. *ASIR—Cunningham*, II, p. 158.
137. S. Beal, *op. cit.*, Bk. II, p. 103.
138. *IAR*, 1957-58, p. 48.
139. *MASI*, no. 74, p. xx.
140. S. Chattopadhyaya, *op. cit.*, p. 258.
141. *ASI—AR*, 1911-12, p. 34.
142. *Ibid.*, 1904-5, p. 51; *AR—ASI—CC*, 1905, p. 41.
143. *ASI—AR*, 1906-7, p. 51.
144. *ASIR—Cunningham*, I, p. 126ff,

burnt wood were also noticed.[145] This clearly suggests the raid and plunder of the city.

The excavations carried out at Kumrahār and its neighbouring areas have brought to light the evidence of fire as a major factor in the ruin of Pāṭaliputra. Spooner noticed sign of "tremendous conflagration" at Pāṭaliputra. The fire was so severe that even the copper bolts which were used for fixing timber to stone columns expanded and caused the fragmentation of stone columns. This fire took place round about the A.D. 5th century.[146] The evidence of fire was also noticed during excavations carried out after Spooner.[147] Thus there is evidence to show that the religious fanaticism of the Huṇas brought about the destruction of these cities where Buddhist *stūpas* and monasteries were situated. At some places the evidence of the Huṇa devastation is clearly seen but even where there is no definite evidence suggesting the onslaught of the Huṇas, the mere fact that Buddhism flourished at those centres suggests that they must have been destroyed by the Huṇas.

(d) *Economic Causes*

The above-mentioned factors may have contributed considerably to the decline of Kuṣāṇa towns in India, but they do not fully explain the rapid decay of urban centres in the post-Kuṣāṇa period. The causes of decline of towns must be viewed in the light of economic conditions prevailing in India in the post-Kuṣāṇa times. The Kuṣāṇa towns flourished on account of prosperous crafts, commerce and money economy, a fact attested by both literary and archaeological evidence.

But the post-Kuṣāṇa period witnessed the decline of industry and trade. For example, working in both glass and ivory declined in the Gupta period. Excavations have brought to light very few specimens of glass and ivory objects .of the Gupta period, whereas those belonging to the Kuṣāṇa period are numerous.[148] Similarly the internal and foreign trade also suffered on account of political developments in India and abroad. Internally, the political instability in India caused by the rise of numerous petty states, constant wars and raids, foreign invasions, insecurity of land routes adversely affected the movement of the caravans. Moreover, lhe traders had to pay more tolls, duties and ferries on account of increased number of principalities which grew as a result of the downfall of the Kuṣāṇas.

Similar conditions in the West brought about an end to the mercantile relations of India and the Roman empire. . The partition of the Roman empire into eastern and western parts in A.D. 364, a succession of weak Roman kings and finally the Huṇa ravages shook the Roman world and snapped Indo-Roman trade connections. Moreover the rivalry between Persian and the Byzantine empires and the manufacture of silk itself in the Byzantine empire by the end of the A.D. 6th century, diminished the prospects of the Indo-Roman trade and deprived Indian merchants of the opportunity to work as intermediaries in the Sino-Roman trade and earn profit. Later on the rise and expansion of Islam in Arabia also disrupted Indian trade with the western world.[149] The coastal trade of India with south-east Asian countries did not bring as much gold to India as did the Indo-Roman trade.

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[145] *AR-ASI-EC*, 1904, p. 18.

[146] *Ibid.*, 1912-13, pp. 58-9.

[147] A.S. Altekar and V.K. Mishra, *op. cit.*, p. 23; B.P, Sinha and L.A. Narain, *op. cit.*, pp. 3, 11.

[148] M.G. Dikshit, *op. cit.*, p. 59ff; N.P. Dwivedi, *op. cit.*, p. 105ff.

The impact of the languishing inland and foreign trade on Indian economy is clearly visible in the Gupta period, which saw its gradual reversal to barter system. The Kuṣāṇas in order to facilitate internal and foreign trade, issued large number of gold and copper coins, but the Guptas issued mainly gold coins. Very few copper and silver coins of the Gupta period are reported.[150] This suggests that coin was not being used in common transactions. The gold coin must have been used as bullion and in ordinary transactions either cowries might have been used as Fa-hsien informs us or barter system may have been resorted to.[151] The paucity of coins in later periods is suggested by Hsuan-Tsang also. He says that the Indian people always "barter in their commercial transactions, for they have no gold or silver coins, pearl shells, or little pearls".[152] Even the gold coins of the Guptas which were initially similar in weight and standard to those of the Kuṣāṇas, were debased from the time of Skandagupta. This clearly indicates economic decline in the Gupta period. [This situation was caused by the inflow of Roman and central Asian gold into India as a result of trade during the Kuṣāṇa period.] Another important reason for the debasement of Gupta gold coins seems to be the fact that political instability in India caused by the Huṇa invasion might have induced people to hoard whatever coin came to them and thus block the circulation of money. This tendency resulted in the gradual disuse of coins and ultimately affected trade and industry under the Guptas.

The money economy also suffered on account of the practice of making land grants to secular and religious beneficiaries. Although the practice started with the Satavāhanas in the Deccan, it came to be pursued more vigorously under the Guptas. But whereas under the Sātavāhanas land grants were made only to support religious establishments, during the Gupta period brāhmaṇas, guilds and royal officers also received land grants. Hsuan-Tsang notes that "the governors, ministers, magistrates, and officials have each a portion of land consigned to them for their personal support".[153] This is indicative of the widespread practice of making land grants. A new feature, unnoticed in the Satavāhana land grants, is the grants of fiscal and administrative immunities to the donees. This created a class of landed intermediaries and undermined the royal authority.[154] In course of time this proved fatal to the existence of money economy and the prosperity of towns. D.D. Kosambi

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149. R.S. Sharma, *Indian Feudalism*, Calcutta, 1965, pp. 66-8.
150. S.K. Maity, *Economic Lie in Northern India in the Gupta Period*, Motilal Banarsidass, 1970 (2nd revised edition), pp. 217-20.
151. S.K. Maity suggests that trade with China in the Gupta period was mainly by barter, *op. cit.*, p. 181.
152. S. Beal, *op. cit.*, Bk. II, pp. 89-90.
153. *Ibid.*, p. 88.
154. R.S. Sharma. *op. cit.*, p. 2ff.

rightly observes "the contribution of the Gupta period was double-edged : immediately very fertile for all; eventually fatal to the advance of a powerful and cultured society. The insularity of the village was to be unshakable hereafter. The peasant would witness the ruin of empire with equanimity while concentrating upon his incresingly miserable patch of land. Salt and metals, brought in by poor caravaneers on barter, never constituted enough exchange with the outside world to raise the level of village culture. Only the occasional fair or pilgrimage relieved isolation to a trifling extent. The cities declined rapidly, Patna becoming a village by A.D. 600, the royal court and camp amounted to a moving capital".[155]

In fact overemphasis on land economy brought about a series of economic consequences which ultimately paved way for the decline and disappearance of towns in the Gupta and post-Gupta periods. The emergence of landed aristocracy destroyed the very basis of trade and industry. It arrested the mobility of artisans. They became an integral part of village economy. The artisans like blacksmiths, carpenters, potters, tanners, etc., who hitherto were free to move from one place to another in search of jobs, were provided with a piece of land to settle permanently and work for the local requirement. Similarly, the imposition of forced labour (*viṣṭi*) on peasants, reduction in the number of permanent tenants and increase in those of the tenants-at-will, must have hampered the surplus production on the basis of which towns existed. Kosambi's following observation is therefore fully justified: 'the most significant move which accounted at once for intitial Gupta prosperity and later decline lay at village level".[156]

In another way also the increase in the number of landed intermediaries affected the growth of trade and industry. The policial fragmentation often caused shift of existing capitals and even trade routes. Thus change in the capital of north Bihar (*Tiribhukti*) from Vaisāli brought about its ruin. Moreover, as both Srāvastī and Pāṭaliputra were ruined, the ancient trade route connecting them via Vaisāli ceased to function and ultimately brought about its decline.[157] Similarly, Pāṭaliputra lost its importance on account of the change of capital to Kanauj.

We may also point out that as feudatories were too much interested in expanding thier spheres of influence they came inevitably in conflict with others. This created an atmosphere of raid, plunder and instability. Under such circumstances recruitment of army, construction of forts, manufacture of weapons attracted more attention and monetary investment than trade and industry.

The temples and monasteries which amassed much wealth on account of generous gifts received from devotees hoarded it. The wealth so acquired gradually turned into unproductive deposits. Thus on the one hand general economy of the land was shattering and on the other hand religious establishments were becoming enormously rich. The hoarding of wealth not only upset the economic equilibrium but also invited foreign invasions. Thus the Huṇa invasions and the destruction of monasteries might have been caused by political, religious as well as economic considerations. Economic factor thus seems to be the most vital cause of the decline of Kuṣāṇa towns in India.

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[155] D.D. Kosambi, *The Culture and Civilization of Ancient India in Historical outline*, 1975 (2nd reprint), p. 196.

[156] *Ibid.*, p. 194.

[157] Y. Mishra and S.R. Roy, *op. cit.*, p. 14.

It has also been suggested that large scale deforestation in the Gangetic basin, caused by over-grazing and clearance of forests might have diminished the supply of nitrogen, reduced rainfall and impoverished the hinterland on which towns thrived.[158] But this view does not seem to be convicing. In fact, deforestation would have inevitably provided grounds for more urban settlements.

Thus the decline of towns in post-Kuṣāṇa period appears as a historical truth. In spite of lively details of towns and town life preserved in the contemporary literary works like the *Kāmasūtra* and the dramas of Kālidāsa, archaeology suggests poor condition of towns in the Gupta and post-Gupta periods.

Recapitulation and Conclusion

The urban history of ancient India begins with the Harappan culture when the earliest cities emerged. The Vedic period was devoid of towns. Towards the beginning of the 6th century B.C. towns re-emerged and continued to exist for a long time. The early centuries of the Christian era further witnessed an increase in the number of towns.

Several scholars have considered the factors leading to the growth of towns. Those who believe that the emergence of towns was mainly due to economic reasons lay stress on the theory of surplus production, technological advancement, increase in arts and crafts and the expansion of trade. Others argue that it was the role of state or religion which was responsible for the emergence of towns. In our opinion one single factor could never give rise to towns. In fact, several economic and non-economic elements influenced the growth of towns. Economic factors without doubt played the most important part but geographical considerations, political stability, social and religious changes also inflenuced the rise of urban centres in ancient India.

Viewed against this background, the unprecendented growth in the number of towns during the Kuṣāṇa period is not difficult to explain. The establishment of the Kuṣāṇa empire, stretching from Bihar in India to central Asia, was higly significant. It restored political peace and stability in the country which had been destroyed as consequence of the collapse of the Maurya empire. In such a situation crafts and commerce could flourish without hindrance. The number of crafts increased considerably during this period, as can be inferred from the literary references. The growing number of crafts augmented industrial production and brightened the prospects of inland and foreign trade. Trade was also stimulated by the increasing use of money and opening up of a number of trade channels connecting different parts of India with west and central Asia. Moreover, the discovery of monsoon by Hippalus around A.D. 46-7 minimised the distance between the Indian and west Asian ports and rendered mid-oceanic navigation easy. In such conditions towns flourished on a large scale during the Kuṣāṇa period.

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[158] *PIHC*, 1972, p. 102.

Archaeological excavations conducted in India, Pakistan, Iran, Afghanistan and central Asia indicate that more urban centres flourished in Kuṣāṇa times than in earlier or later periods. However, not all existing towns were exclusively Kuṣāṇa in character. A good number of them had an earlier origin and continued to exist in the post-Kuṣāṇa period as well. But the most striking thing about them is that the Kuṣāṇa layers at the excavated sites are more prosperous, both in regard to structures and antiquities, than earlier or later phases. Some of the flourishing towns of the period find mention in the earlier and contemporary literature, i,e., Taxila, Mathurā, Indraprastha, Hastināpura, Kauśāmbī, Banaras, Pāṭaliputra, Vaiśālī, etc. The *Rājataraṅgiṇī* of Kalhaṇa is the only text which refers to three cities, Huṣkapura, Juṣkapura and Kaniṣkapura, as having been built by three Kuṣāṇa kings, Huṣka, Juṣka and Kaniṣka in Kashmir.

But archaeology suggests the existence of numerous other urban settlements which do not find mention in literature and whose identification with known ancient town sites has not been possible so far. Excavations have brought to light many sites in the Panjab, Haryana, Uttar Pradesh and Bihar yielding remarkable evidence of habitation in the Kuṣāṇa period. The large scale brick structures, provisions for drains, bathrooms, wells, streets, paved floors etc. noticed at places like Sanghol, Rupar, Bara, Rājā-Karṇa-Kā-Quilā (Kuruksetra), Purānā Quilā (New Delhi), Noh, Bairat, Sonkh, Atrañjikhera, Ahichchhatra, Chirand, Buxar, Sonpur and other sites; the discovery of Kuṣāṇa coins, pottery, terracottas, crucibles, iron slags and ovens, metal objects, and above all the absence of agricultural implements from the excavated sites, suggest them to be flourishing towns during the Kuṣāṇa period.

The location of these towns was largely influenced by geographical considerations. They were situated either on river banks, or in proximity of rich hinterland and were well connected with trade channels. Places of strategic, administrative and religious importance also developed into towns.

The planning of ancient Indian towns was based on the certain basic principles. The first consideration in laying out a town was the selection of a geographically suitable place. Greatest attention was paid to the defence of the cities. This could be of two types, natural or artificial. The natural defence of the cities was provided by rivers, mountains, forests or deserts and the artificial one by constructing city walls, moats, ramparts and ditches. The literary works suggest that cities were surrounded by walls and moats, gates with towers, to keep watch on the entry of the undesirable elements into cities. The walls were made either of mud, stone or bricks. Archaeological excavations have brought to light remains of fortification walls at places like Taxila, Sanghol, Śrāvastī, Kauśāmbī, Vaiśālī and Pāṭaliputra. However, all the towns that prospered during this period were not fortified.

Within the city walls were constructed different religious and residential structures, and provision was made for traffic movement, and drainage system. Facilities for drinking water, recreation and markets were provided. The vertical excavations carried out in India do not present a comprehensive picture of the town-planning and structures during the period, but the available remains give us some idea about contemporary structures.

It appears that both single-storeyed and multi-storeyed houses were constructed. Multi-storeyed houses must have been used by nobility whereas single-storeyed ones by middle class or common people. Poor people must have lived in houses made of perishable material like wood, bamboo, etc. The houses were often white-washed and decorated in various ways. The internal arrrangement of the houses suggest that specific apartments for the use of male and female members were reserved. Provision was made for sleeping chambers, kitchens, baths and other purposes. Drains were provided to carry out refuge and drain water. The roofs of houses were either thatched, made flat and covered with clay or tiled. Timber was used profusely in the construction of houses. The houses had invariably, access to roads, streets, lanes or by-lanes. As regards building materials, in north-western parts of the country, stone was used profusely along with bricks, but in northern India, the use of bricks of large dimensions was fairly common. The houses of common men might have been constructed of perishable material like mud, bamboo, etc.

Large number of religious edifices like Hindu temples, Buddhist and Jaina *stūpas, saṁghāramas, vihāras, devakulas,* shrines for *nāga* worship, etc., were constructed during the Kuṣāṇa period. The contemporary religious structures suggest the predominance of Buddhism. The religious edifices, unlike secular structures, reveal very few traces of foreign architectural influence. The Indian architectural tradition of the earlier period noticed at Sanchi and Bharhut were improved upon and made more massive and ornamental during the period under study

The growth of towns created a class of urban professionals who earned their livelihood either by serving the state or nobility or by engaging themselves in various arts, crafts, commerce or some independent professions. The material relics discovered from Kuṣāṇa horizons over a widely dispersed area testify to the existence of craft groups like those of the potters, smiths, weavers, tailors and so on. This is also supported by inscriptions. These craft groups mainly flourished in towns where there was greater demand for the commodities produced by them.

An important feature of the urban economy of the period was that most of the artisans and craftsmen belonged to to the lower strata of the *varṇa* ridden society. However, there is no means to examine how far the dharmistic injunctions regulating the practice of various arts and crafts by men of lower *varṇas* were followed. But it is quite likely that the contact with and the influence of foreign elements like the Kuṣāṇas might have loosened the shackles of the *varṇa* system. Generally, artisans and craftsmen worked either as individual entrepreneurs or through guilds. Although guilds of artisans and craftmen are seldom mentioned in the Kuṣāṇa inscriptions, contemporary law-books and epigraphic evidence from western India clearly demonstrate their importance. The guilds must have given a fillip to the growth of crafts and industries during the early centuries of the Christian era.

Apart from being the centres of production and consumption, the Kuṣāṇa towns also played pivotal role in the exchange of commodities. The most important function of the towns, from the economic point of view, was that they functioned as marts. The prosperity of towns depended on the volume of trade carried through them. In fact, brisk trade was a cause as well as an effect of the growth of towns. The literary sources of the period indicate the role of towns in trade and commerce.

The unification of almost the whole of northern India under the Kuṣāṇas brought about peace in the area which provided a congenial atmosphere for the growth of trade. More advantageous from the economic point of view was the Kuṣāṇa control of the Indus and the Gangetic basins, and the command over the silk Road which passed through the Kuṣāṇa dominions of central Asia and connected it with China and the west Asian provinces of the Roman empire. The prosperity of Kuṣāṇa towns in the Indian sub-continent as well as central Asia largely depended on the profit gained from the trade through the silk Road. The extensive use of currency is another indication of the prosperity of towns and trade.

The rise of the Sātāvahanas in the Deccan and the Sakas in western India, enabled these powers to control the major inland and oceanic trade routes. It also appears that there was some sort of agreement between the Sakas, the Sātāvahanas and the Kuṣāṇas regarding the uninterrupted flow of trade. The growing demand for Indian luxury goods in the western world and the attempts made by the Roman emperors to ensure the security of trade routes also acted as a stimulus to India's trade with the western world during the period under study.

The *Miliñdapanho*, the *Mahāvastu*, the Buddhist *Avadānas*, the *Periplus of the Erythraean Sea*, the accounts of Pliny, Ptolemy and Strabo, all testify to the flourishing trade and commerce of India during the early centuries of the Christian era. Evidence is also available to suggest India's mercantile relations with central Asia, China and south-east Asia during the early centuries A.D. The main items of Indian export consisted of raw materials, precious stones, fine variety of cloth and spices, whereas India imported finished goods manufactured in different industrial centres of the western world.

The balance of foreign trade was in favour of India. Indian merchants earned a lot of money which they spent on wine, women, music, dance and in the development of art and architecture. The contemporary Indian literature gives some idea of the prosperity of the mercantile class. The merchants, by dint of their wealth, influenced politics, economy and society of the period. Marked differences appeared in the village and town life. *The Gāthā Śaptasatī* of Hala and the *Kāmasūtra* of Vātsyāyana clearly demonstrate the difference between the rural and urban way of living. However, it is not possible to examine the relative status of the different classes of merchants but generally speaking, the status of the merchants was definitely higher than that of peasants, artisans or service holders.

We have no idea of the administration of Kuṣāṇa towns because there is no work comparable to the *Arthaśāstra* to shed sufficient light on the municipal administration. Kuṣāṇa inscriptions are also completely silent on the point. We may presume that the Mauryan pattern of urban administration might have continued with some modifications.

With the decline of the Kuṣāṇa power in the 3rd century A.D., the fortune of towns was affected adversely. Most of the towns which flourished during the Kuṣāṇa period reveal poor structural and antiquarian remains in the post-Kuṣāṇa period in northern India. Some of the earlier town sites became deserted immediately after the collapse of the Kuṣāṇa power, while others were abandoned either in the Gupta or post-Gupta times. The decline of towns in the post-Kuṣāṇa period seems to be a universal feature, for even in western India, the Deccan and central Asia, they exhibit a declining trend in the post-Kuṣāṇa period. Both Fa-hien and Hsuan-Tsang describe some of the towns as deserted and as being in ruins.

Various political, socio-economic and religious factors may have caused the decline of towns. Natural calamities, like fire and flood, change in the course of the rivers, and raids and plunders of towns, may have also undermined the urban centres in the post-Kuṣāṇa times. But the economic factor seems to have played a crucial role in this connection. The partition of the Roman empire into eastern and western parts in A.D. 364, a weak succession of Roman kings and the Huṇa ravages shook the Roman world and snapped Indo-Roman trade connections. It had far-reaching consequences for Indian industries. Moreover, the rivalry between the Persian and the Byzantine empires by the end of the 6th century A.D. diminished the prospects of the Indo-Roman trade and deprived Indian merchants of the opportunity to work as intermediaries in the Sino-Roman trade.

The impact of fall in the volume of trade is clearly visible in the Gupta economy which is marked by increasing paucity of coins of lower denominations. The Guptas could not issue sufficient currency for regular transaction and largely minted gold coins as bullion. Even the gold coins of the Guptas, which were initially similar in weight and standard to the Kuṣāṇa gold coins, were debased from the time of Skandagupta. Both Fa-hien and Hsuan-Tsang point to the lack of standard coins and to the prevalence of the barter system. The Gupta monetary system suffered on account of political instability casused by Huṇa raids and plunders and the large-scale practice of making land grants to secular and religious beneficiaries. The land grants created a class of intermediaries between the peasants and the state, undermined the royal authority and led to the growth of self-sufficient economic units thereby destroying the very basis of trade, industry and towns.

APPENDIX

List of sites (excavated and explored) in northern India which have yielded Kuṣāṇa antiquities (structures, pottery, terracotta, sculptures, coins, etc.). The place names have been arranged alphabetically and state-wise. This list has been prepared mainly on the basis of *Indian Archaeology—A Review*, published till 1982.

1. BIHAR

	Site	*District*
1.	Bajidpur	Vaisali
2.	Champa	Bhagalpur
3.	Charittarvana (Buxar)	Sahabad
4.	Chechar-Kutubpur	Vaisali
5.	Hansa	Ranchi
6.	Ite	,,
7.	Khuntitoli	,,
8.	Konhara-Ghat (Hajipur)	Vaisali
9.	Kumrahar (Patliputa)	Patna
10.	Madurapur	Vaisali
11.	Maniyarpur	,,
12.	Ramchaura	,,
13.	Sardkel	Ranchi
14.	Sonpur	Gaya
15.	Taradih	,,
16.	Vaisali	Vaisali

2. DELHI

1.	Purana-Quila (Indraprashtha)	New Delhi

3. HARYANA

	Site	*District*
1.	Agroha	Hissar
2.	Amin	Karnal
3.	Arunnya	Karnal
4.	Beri	Rohtak
5.	Bindrohi	Sonipat
6.	Daulatpur	Karnal
7.	Mohan-Bari	Rohtak
8.	Majra-Asthal	,,
9.	Naurangabad	Bhiwani
10.	Pehowa	Karnal
11.	Rookhi I	Rohtak
12.	Raja-Karna-ka-kila	Karnal
13.	Rohtak	Rohtak
14.	Thaneshwar	Karnal
15.	Theh Polar	Karnal

4. JAMMU & KASHMIR

1.	Akhnur	Jammu
2.	Amb	,,
3.	Bahor	,,
4.	Balawan	,,
5.	Bambyar	Baramula
6.	Ban Sultan	Jammu
7.	Bathur	,,
8.	Bhulwal	,,
9.	Bunagantmula	Baramula
10.	Bhulwal	Jammu

Site	*District*
11. Chak Bowal	Jammu
12. Chak Sanga	,,
13. Chandian (Jafar chak)	,,
14. Chatta	,,
15. Dalpat	,,
16. Damana	,,
17. Dhanu	,,
18. Dharmkhu	,,
19. Drangbal	Baramula
20. Dowarah	,,
21. Fatehgad	,,
22. Gajansu	Jammu
23. Galali	,,
24. Galwadde	,,
25. Ghaink	,,
26. Ghurota	,,
27. Gingal	Baramula
28. Grahi	Jammu
29. Gude	,,
30. Harial	Dodda
31. Harwan	Srinagar
32. Huin	Baramula
33. Kairi	Jammu
34. Kalakam	,,
35. Kanispur	Baramula
36. Karalchak	Anantanaga
37. Kitshom	Baramula
38. Kot	Jammu
39. Kotali Gujram	,,
40. Kotali Panditan	,,
41. Kurwanda	,,
42. Malapur	Baramula
43. Malehal	Jammu
44, Mandi Ka Mehre	,,
45. Manda	,,
46. Manjgiran	Baramula
47. Marjali	Jammu
48. Nad	Jammu
49. Nagbani	,,
50. Nagabal	Ahantanaga
51. Nargara	Jammu

Site	*District*
52. Naushahra (Pirniana)	Baramula
53. Pahta	Jammu
54. Pahlipuri	Baramula
55. Palaura	Jammu
56. Panjor	,,
57. Paran	Baramula
58. Paroah	Jammu
59. Patenhal	,,
60. Pahlora	,,
61. Partara	,,
62. Pambarwan	,,
63. Pilan	Baramula
64. Puchal	Dodda
65. Rathua	Jammu
66. Shahkot	Baramula
67. Sajwal	Baramula
68. Sarot	,,
69. Seri Panditan	,,
60. Shahkot	Baramula
71. Singhpur	,,
72. Saulichak	Jammu
73. Takiya Bala	Anantanaga
74. Tathemula Kalan	Baramula
75. That	Jammu
76. That Jandial	,,
77. Tibba Name Shah	,,
78. Tikri	,,
79. Wushkur (Uskar)	Baramula
70. Zainpur	,,
81. Zandafaran	,,
82. Zugiyar	,,

5. MADHYA PRADESH

1. Besnagar	Vidisha
2. Dangwada	Ujjain
3. Eran	Vidisha
4. Gilaulikhera	Morena
5. Jaderna	Gwalior
6. Keolari	Datia
7. Nandur	Raisen
8. Pagara	Dhar

Site	District
9. Runija	Ujjain
10. Turnain (Tumbavana)	Guna
11. Ujjain	Ujjain

6. ORISSA

Site	District
1. Asurgarh	Kalahandi
2. Sisupalgarh	Puri

7. PUNJAB

Site	District
1. Ajaram	Hoshiarpur
2. Alamir	Ludhiana
3. Alia	Amritsar
4. Bahini Raiyan	Ludhiana
5. Bara	Ambala
6. Basami	Ludhiana
7. Baundal	,,
8. Bharariwal	Amritsar
9. Bhatta Dhua	Ludhiana
10. Burkhara	,,
11. Chhapar	,,
12, Dadheri	,,
13. Deo	Amritsar
14. Dhandra	Ludhiana
15. Dhandari-Kalan	,,
16. Dhandari-khurd	,,
17. Dhunda	Amritsar
18. Gadowal	Ludhiana
19. Ghuram	Patiala
20. Gopalpura	Amritsar
21. Gorsian Qadir	Ludhiana
22. Gaunspur	,,
23. Hambran	,,
24. Hathor	,,
25. Haripur	Jullunder
26. Hussanpur	Ludhiana
27. Jurahan	,,
28. Jagera	,,
29. Jangpur	,,
30. Kakka	Mandiala
31. Kanganwal	Ludhiana
32. Katani kalan	,,
33. Kathpalon	Jullunder
34. Khatra-chuhar	Ludhiana
35. Kazarwal	Amritsar
36. Kohara	Ludhiana
37. Kular	,,
38. Kum Kalan	,,
39. Mahlon	,,
40. Malakpur	,,
41. Mandiala	Amritsar
42. Mangli Nichi	Ludhiana
43. Mansuran	,,
44. Mattewal	Amritsar
45. Mor Karima	Ludhiana
46. Nagar	Jullunder
47. Nanakpur-Jagera	Ludhiana
48. Nir	Jullunder
49. Pamal	Ludhiana
50. Pirthipur	,,
51. Raipurbet	,,
52. Raipurkot	,,
53. Rajapura	,,
54. Rajni Devi	Hoshiarpur
55. Ropar (Rupar)	Ambala
56. Raqba	Ludhiana
57. Salempur	,,
58. Sanghol	,,
59. Sarabah	,,
60. Sidhwan Khurd	,,
61. Singh Bhagwanpur	Rupnagar
62. Sirsali Kalan	Amritsar
63. Sugh	Ambala
64. Sunet	Ludhiana
65. Talwara	,,
66. Tapiala	Amritsar
67. Then Lahara	Ludhiana
68. Wazir Bhullar	Amritsar

8. RAJASTHAN

Site	District
1. Abar	Bharatpur

Site	*District*
2. Aghapura	,,
3. Aguncha	Bhailwara
4. Ajarka	Alwar
5. Aruka	Jhunjhunu
6. Arwara	Bharatpur
7. Babiriya	Alwar
8. Badnagar	Jaipur
9. Bagheri	Alwar
10. Bahnera	Bharatpur
11. Bairat	Jaipur
12. Barso	Bharatpur
13. Bedwas	Alwar
14. Belare	Bharatpur
15. Bewa Patan	Sikar
16. Beedh-ki-Jori	Jaipur
17. Bharunda kalan	Thunjhunu
18. Bharunda khurd	,,
19. Bhatiwar	,,
20. Bijwara	Alwar
21. Buchobharat	Jaipur
22. Budha	,,
23. Budh	Jhunjhunu
24. Buharu	Bharatpur
25. Chhawshri	Jhunjhunu
26. Daduka	Jaipur
27. Darapur	Bharatpur
28. Gada Kheda	Jhunjhunu
29. Gadhala	,,
30. Gangpur	Alwar
31. Gori Budha	Jhunjhunu
32. Guhala	Sikar
33. Hukumpura	Jhunjhunu
34. Jahaj (Pachalangi)	,,
35. Jalabas	Alwar
36. Jodhpur	Jaipur
37. Kalyanpur	,,
38. Ked	Jhunjhunu
49. Khandela	Sikar
40. Khori	Alwar
41. Kiradot	Jaipur
42. Mandhu	Jaipur
43. Narot-ki-Pahari	Jhunjhunu
44. Matana	,,
45. Nand	Ajmer
46. Narhad	Jhunjhunu
47. Natas	Jhunjhunu
48. Nayogaya	Bharatpur
59. Noh	,,
50. Pachala	Tonk
51. Rajnota	Jaipur
52. Ramnagar	Alwar
53. Ranasar	Sikar
54. Rang Mahal Theri	Ganganagara
55. Richocha	Swai Madhopur
56. Sahera	Bharatpur
57. Sailkhera	Alwar
58. Sanauli	,,
59. Satwas	Bharatpur
60. Sehali Kalan	Alwar
61. Shivanathpur	Jhunjhunu
62. Shrimadhopur	Sikar
63. Singhana	Jhunjhunu
64. Sunari	,,
65. Tara-ka-Bas	,,
66. Tejpura	Alwar
67. Tigoon	,,
68. Trilokpur	Sikar
69. Udaipur Wati	Jhunjhunu
70. Umrain	Bharatpur
71. Unaya	,,
72. Vahaja	,,
73. Viravai	,,

9. UTTAR PRADESH

1. Abdullahganj (Khilwali Tal)	Budaun
2. Ahar	Bullandshahar
3. Ahichchhatra	Barrielly
4. Ahmadgarh	Bulandshahar

	Site	*District*
5.	Ajmeripur	Saharanpur
6.	Akbar pur Garhi	Meerut
7.	Ambkeri I	Saharanpur
8.	Aneki I	,,
9.	Aneki III	,,
10.	Aneki IV	,,
11.	Aneki V	,,
12.	Anwarpur	,,
13.	Arsara	Mainpuri
14.	Aranjikhera	Etah
15.	Ayodhya	Faizabad
16.	Baheri (Disal-pur-khera)	Muzaffarnagar
17.	Balpur	Pilibhit
18.	Batesvara	Agra
19.	Bargaon	Bulandshahar
20.	Barhah	Etawah
21.	Baruna Khurd	,,
22.	Bhalni	Saharanpur
23.	Bhankror	,,
24.	Bhoapur	Muzaffarnagar
25.	Bharadwaj Ashram	Allahabad
26.	Bhasaura	Etawah
27.	Bhita	Allahabad
28.	Bikapur Dobah	Etawah
29.	Birdpur	Basti
30.	Buddha Khera	Saharanpur
31.	Budhena	Bulandshahar
32.	Bhurdhari	Lucknow
33.	Burru Pahphund	Etawah
34.	Chaknagar kneda	,,
35.	Chakra Tirtha	Kanpur
36.	Chandpur	Bulandshahar
37.	Chandanpur	Kanpur
38.	Chandi Ghat	Dehradun
39.	Chanwar	Kanpur
40.	Club Ghar Teela (Kanauj)	Farukhabad
41.	Dahiar	Lucknow
42.	Danpur	Bulandshahar
43.	Dandauli	Shaharanpur
44.	Dasehra	Bulandshahar
45.	Deghava	Gorakhpur
46.	Ferozpur	Merrut
47.	Ganwaria	Basti
48.	Goanri	Etawah
49.	Godha	Meerut
50.	Hardoi	,,
51.	Harchandpur	Etawah
52.	Harsinghpur	,,
53.	Hasangarh	Bulandshahar
54.	Hastinapur	Meerut
55.	Hetampur	Shaharnpur
56.	Hulas	,,
57.	Hulas Khera	Lucknow
58.	Humayunpur	Meerut
59.	Islampurdas	Bijnor
60.	Ismailpur	Bulandshahar
61.	Jafarabad	Bijnor
62.	Jafarpur (Gurdipur)	Bulandshahar
63.	Jainer	Saharanpur
64.	Janakavaram	Gonda
65.	Janipur	Sharanpur
66.	Jatwara	Muzaffarpur
67.	Kagwali	Shahranpur
68.	Kanauja	Farukhabad
69.	Karwar-khera	Moradabad
70.	Kaseri	Meerut
71.	Kashipur	Nainital
72.	Kasia	Gorakhpur
73.	Katra keshavadas	Mathura
74.	Khai-khera	Muzaffarpur
75.	kailapur	,,
76.	Kaithora	,,
77.	Kausambi	Allahabad
78.	Kauriaganj	Aligarh
79.	Kenduki	Saharanpur
80.	Kisraom	Mainpuri
81.	Khajnavar	Shahranpur
82.	Khariad	Mainpur
83.	Kheradih	Ballia
84.	Khera-khas	Moradabad

Site	*District*
85. Khirka-zunarkar	Shahranpur
86. Khurrampur	„
87. Kotwar	Jaunpur
88. Kudarkot	Etawah
89. Kuri Kamalpur	Meerut
90. Kushmri	Mainpuri
91. Lodipur	Saharanpur
92. Lohia Khera	Etah
93. Mahjadpur	Saharanpur
94. Mahmudpur-Sikera	Merrut
95. Markandawar	Gorakhpur
96. Manwan	Sitapur
97. Masaon	Ghazipur
98. Mathurapur Mor	Bijnor
99. Maur-khurd	Meerut
100. Maya Kund	Dehradun
101. Mayapur	Saharanpur
102. Mohmmadpur (Vihar)	Budaun
103. Moradhwaj	Bijnor
104. Mukallampur	Muzaffar-nagar
105. Muzaffarabad	Saharanpur
106. Nakipur-Bamnaul	Bijnor
107. Nagla khas Gloura	Mainpuri
108. Nagla Dayal	„
109. Nagla Khera	„
110. Nagaria	Etawah
111. Nariha	Kanpur
112. Nahusa-ka-Tila	Azamgarh
113. Nandan	Agra
114. Nangaon	Etawah
115. Nathu	Budaun
116. Nawabganj	Kanpur
117. Niroli	Mainpuri
118. Nurnagar	Muzaffar-nagar
119. Pachhini Sarira	Allahabad
120. Pakhangoi	Etawah
121. Pakra Buzurg	Unnao
122. Pariar	„
123. Parichchatagarh	Meerut
124. Pasua	Etawah

Site	*District*
125. Patlokar	Saharanpur
126. Piprahawa	Basti
127. Qawan	Buland-shahar
128. Rai	Muzaffar-nagar
129. Rajghat	Banaras
130. Raki	Pratapgarh
131. Rambagh	Bijnor
132. Rampur	Muzaffar-nagar
133. Ranihat	Tehri
134. Ronda	Bulandshahar
135. Rurukalan	Etawah
136. Sabhad	Etawah
137. Sahan	Mainpuri
138. Salempur-Mahdud	Saharanpur
139. Salargarh	Basti
140. Samain	Etawah
141. Samutti	Kanpur
142. Sankara	Aligarh
143. Sarnath	Banaras
144. Sarthal-khera	Moradabad
145. Satikund	Saharanpur
146. Shakoorganj	„
147. Shondat	Merrut
148. Shukartar	Muzaffar-nagar
149. Sikrera	„
150. Sikri	„
151. Sirsather	Budaun
152. Sasandi	Lucknow
153. Sohgaura	Gorakhpur
154. Sonda-Jatpur	Bulandshahar
155. Sonkh	Mathura
156. Sonouthi	Agra
157. Sravasti	Gonda
158. Sringverpur	Allahabad
159. Suncheti-Mustahkam	Saharanpur
160. Taharpur	„

Site	*District*
161. Tahdhera	Muzaffarnagar
162. Tajpur	Meerut
163. Tamkhani	Garhwal
164. Tarfara	Aligarh
165. Tigri	Saharanpur
166. Umrain	Etawah
167. Unaula	Budaun
168. Unchagaon	Saharanpur
169. Vairat	Ghazipur
170. Virabhadra	Dehradun
171. Yaseenpur	Bulandshahar

Apart from the sites mentioned above, there are many other "Early Historical sites" which may cover the Kuṣāṇa phase also, but since they do not refer specifically to the Kuṣāṇas they have not been included in the list. The list-however, includes some sites of Punjab and Rajasthan, termed as "Ranga Mahal". An idea about Kuṣāṇa urban settlement pattern can be formed on the basis of this list.

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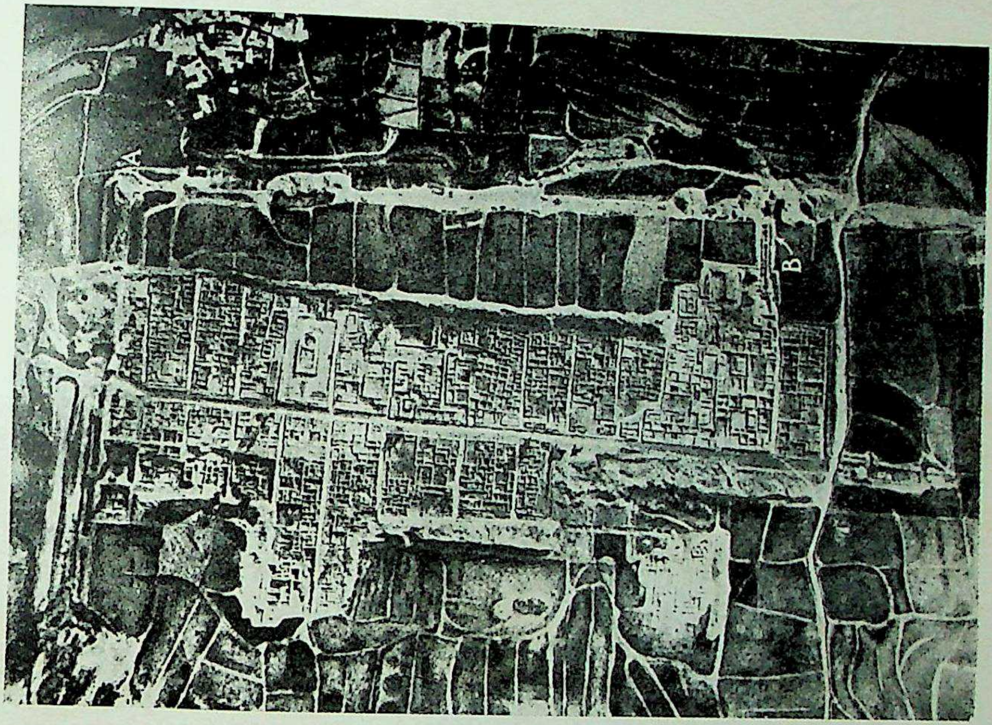
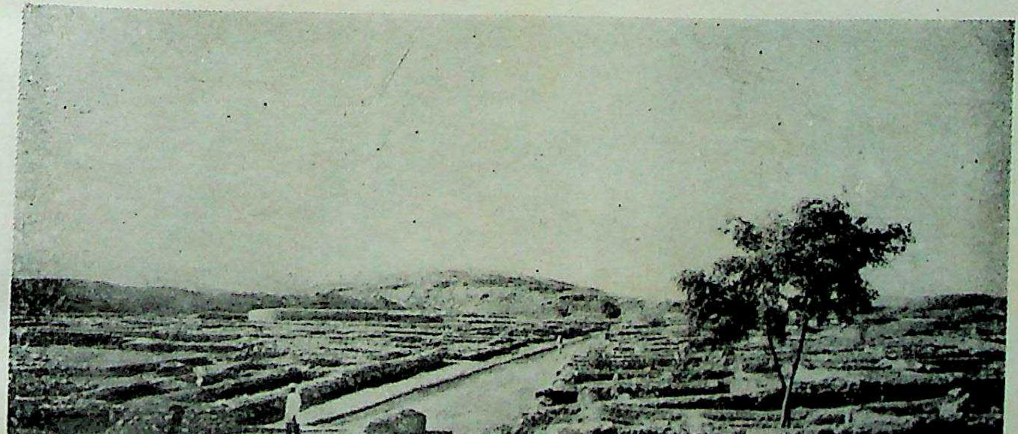
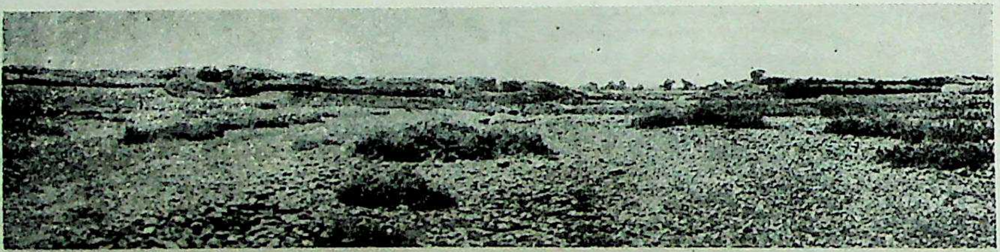


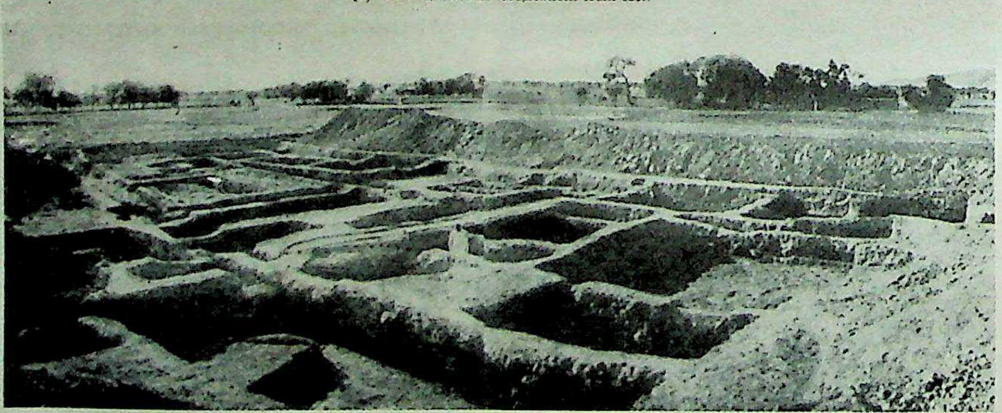
I Air-view of Taxila (Sirkap) : showing north-east corner bastion.



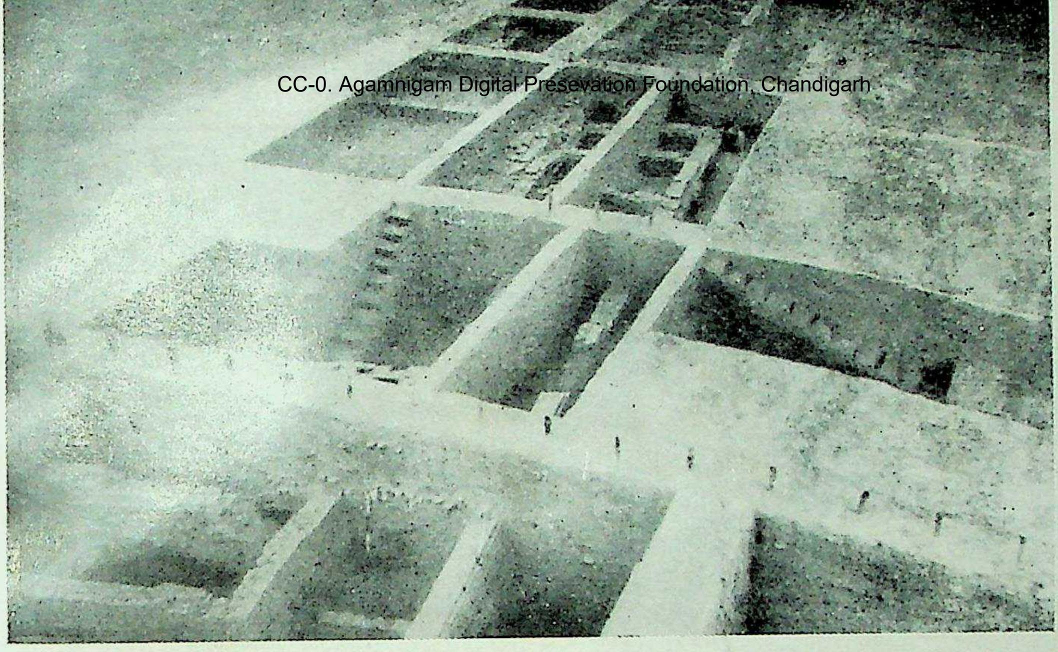
II Taxila (Sirkap) : The Main Street of the Sake-Parthian city, as seen from near the northen gateway.



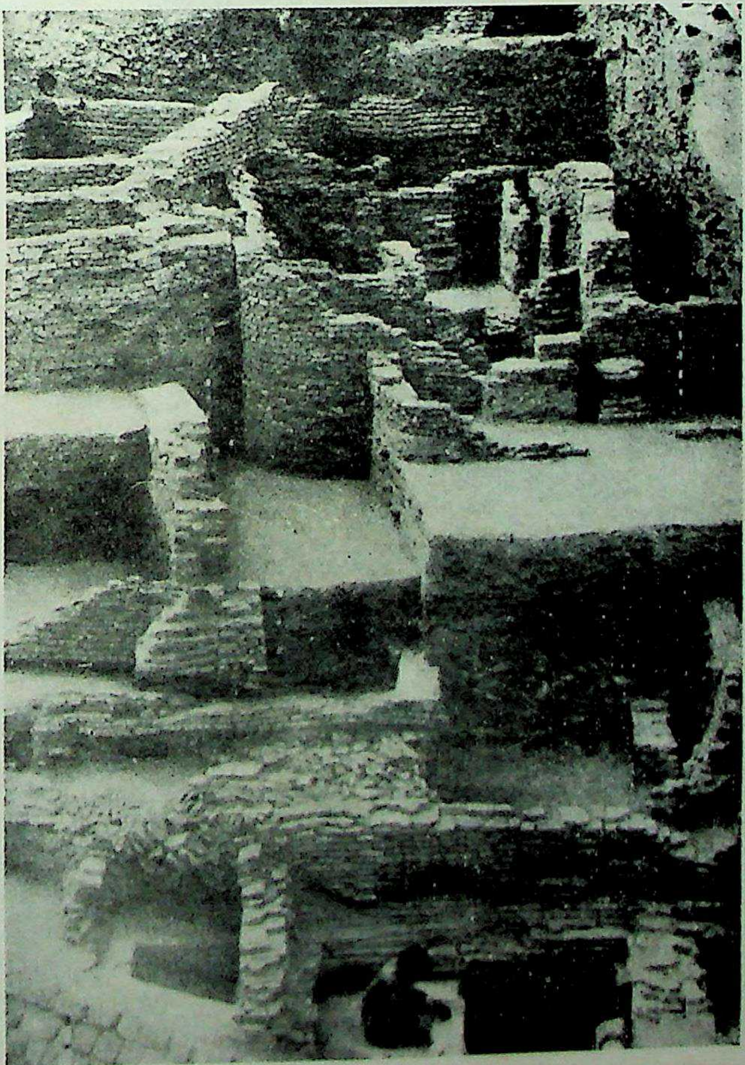
(*a*) View of Sirsukh fortifications from east.



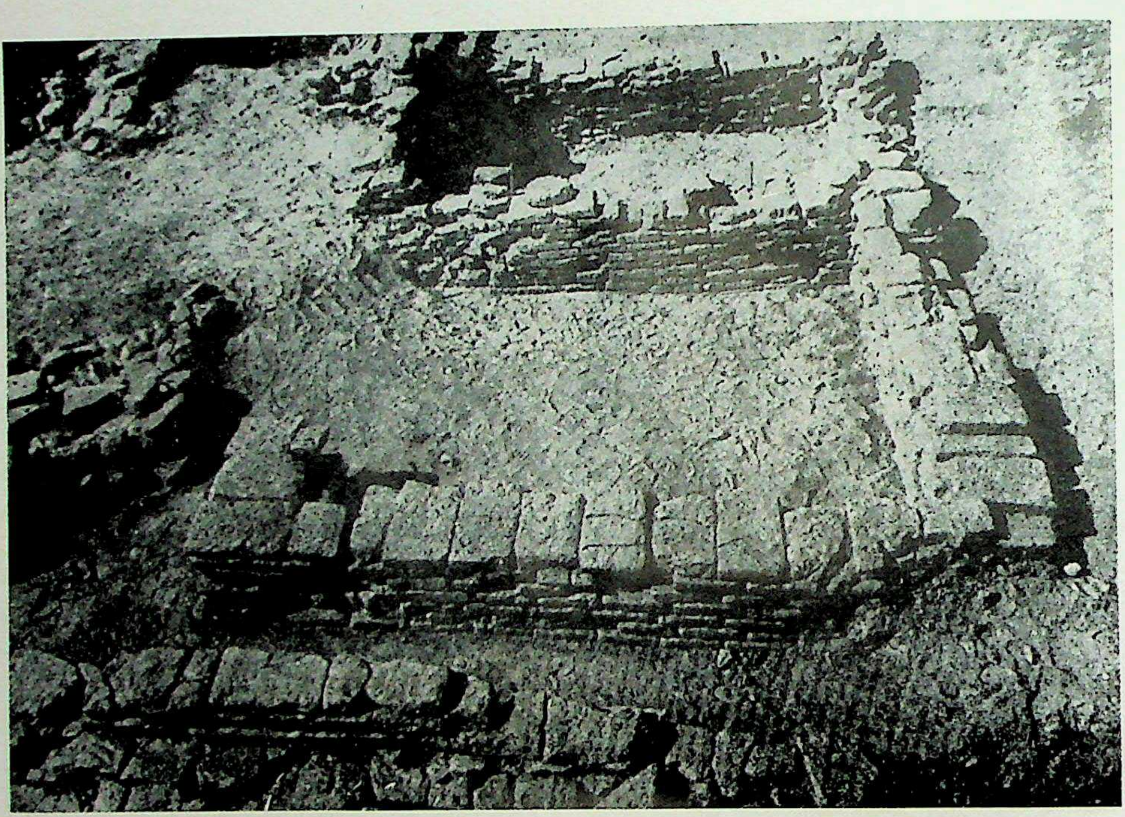
III Taxila (Sirsukh) : view of Sirsukh fortification from east



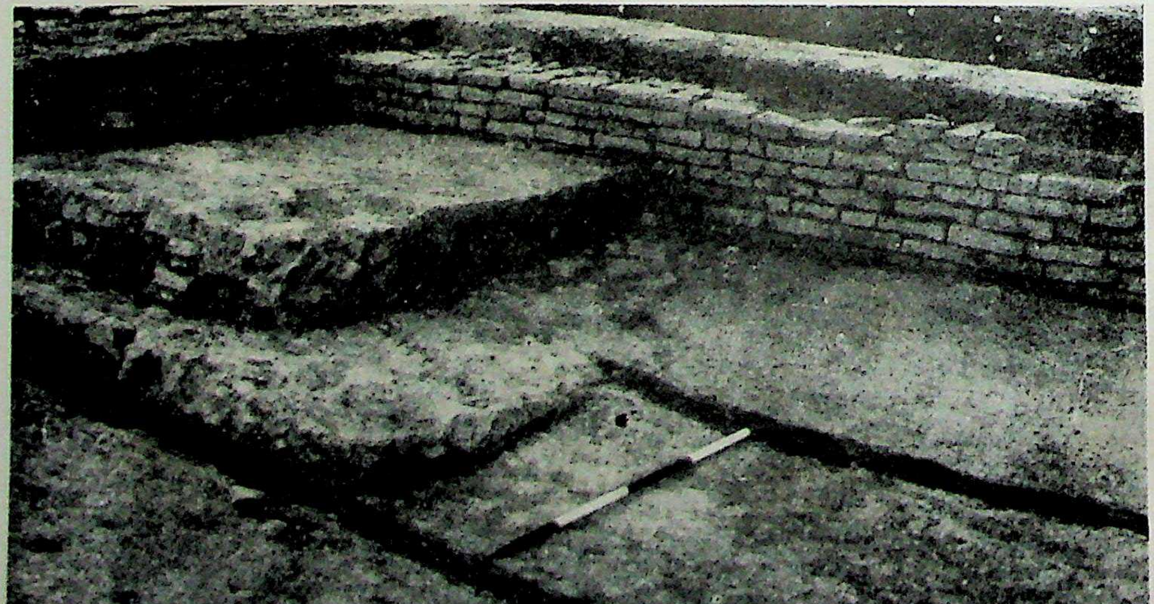
IV Vaishalî : Military Barracks of Kushana Period



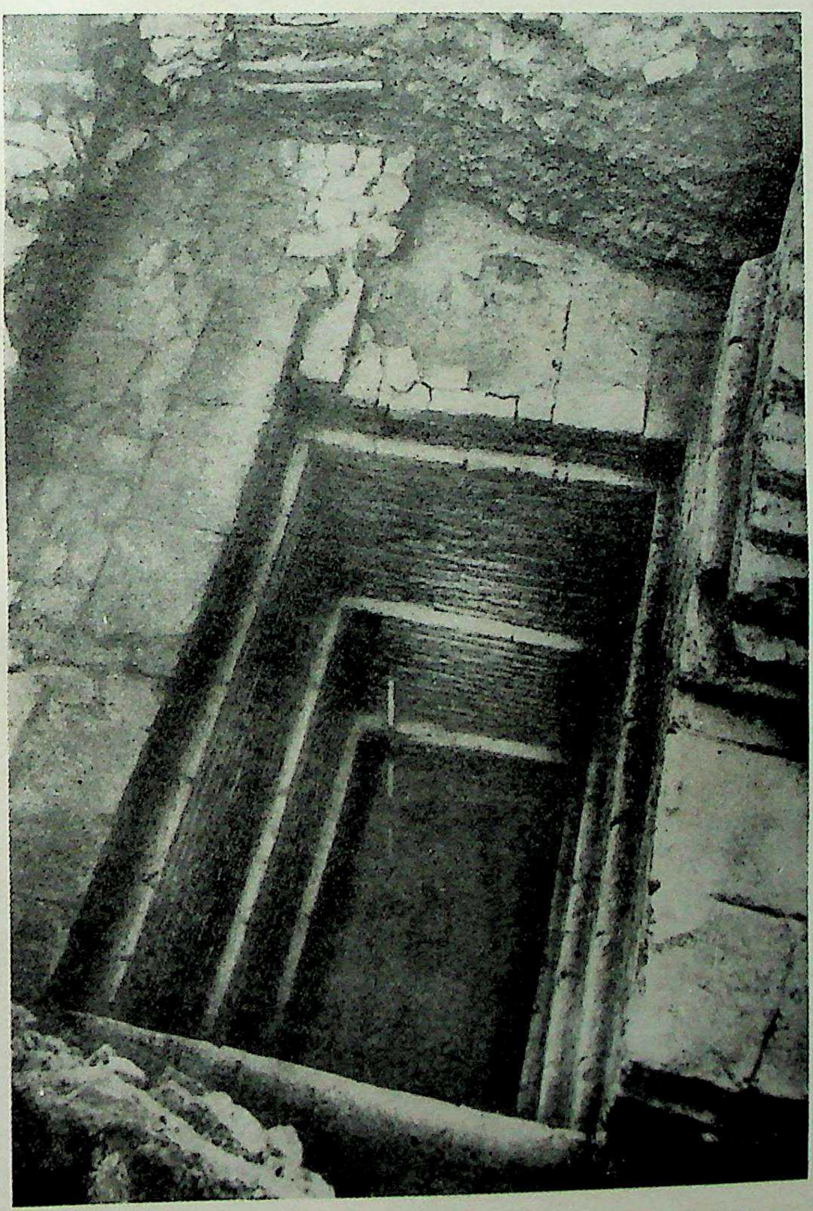
V. Purana Quila, New Delhi : Structures of the Kushana



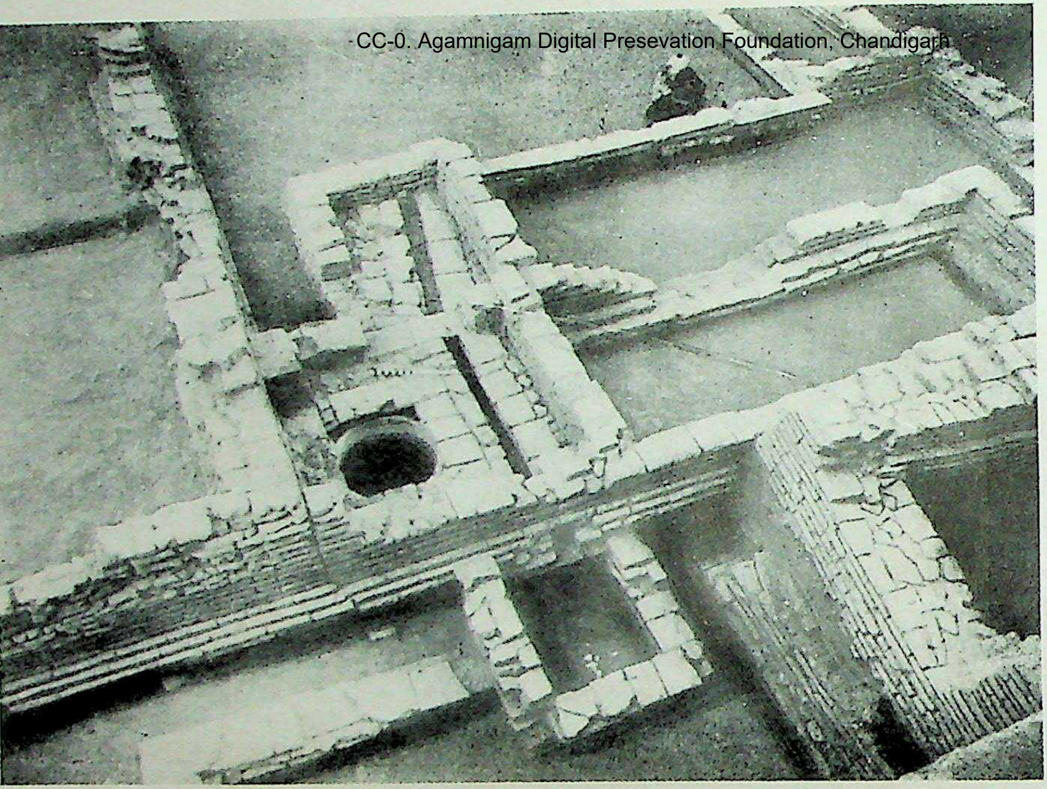
VI SONKH : Late Kushana structure



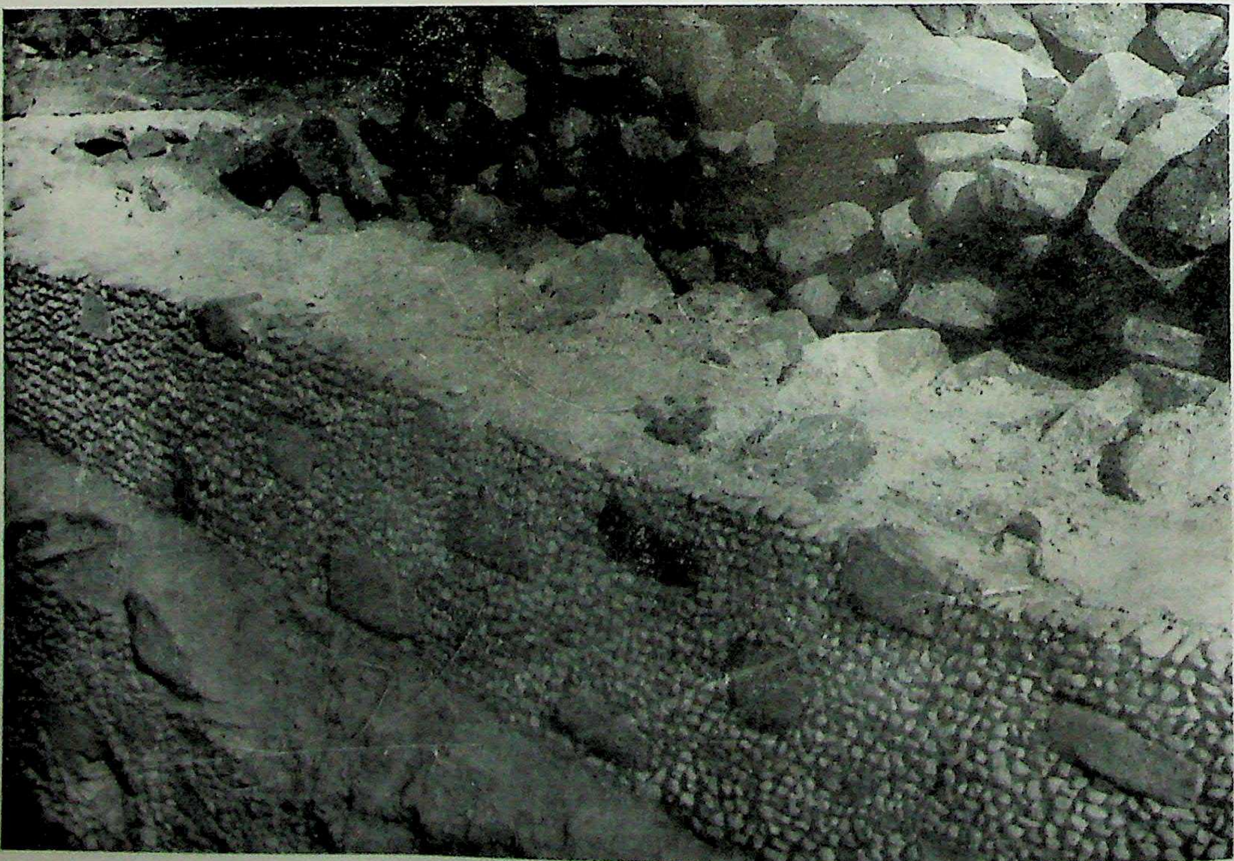
VII Kausambi : Road showing different levels and cart-ruts



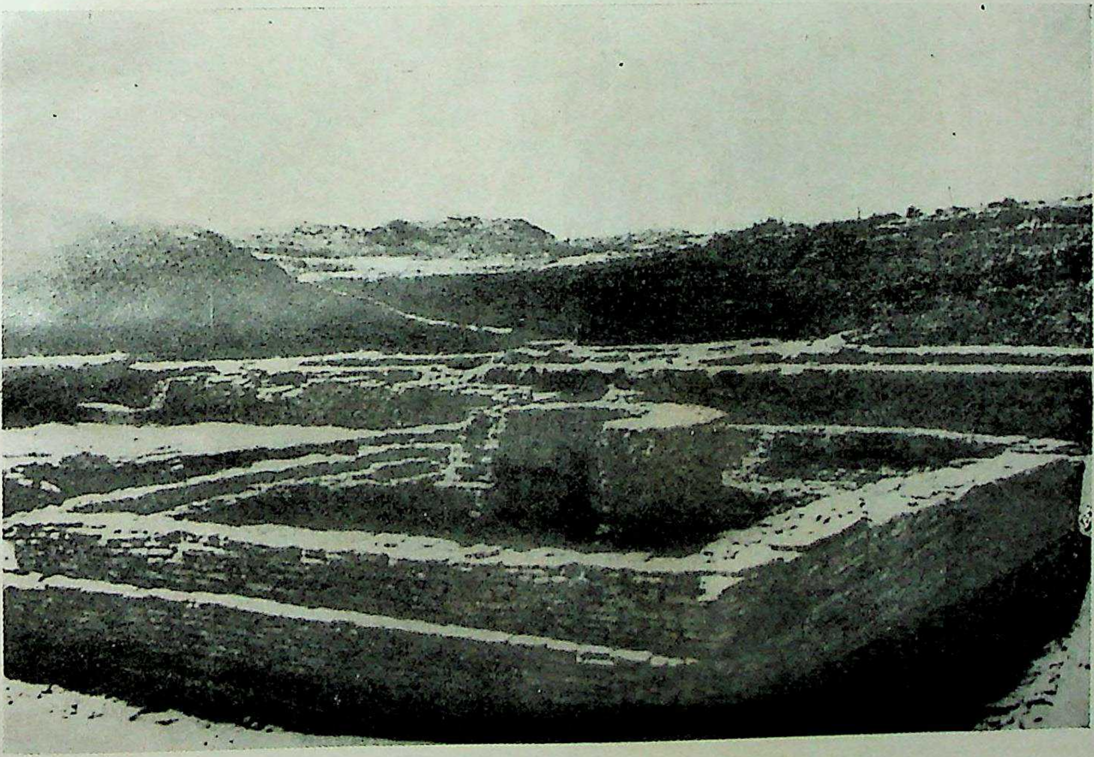
VIII Kausambi : Brick Tank-2



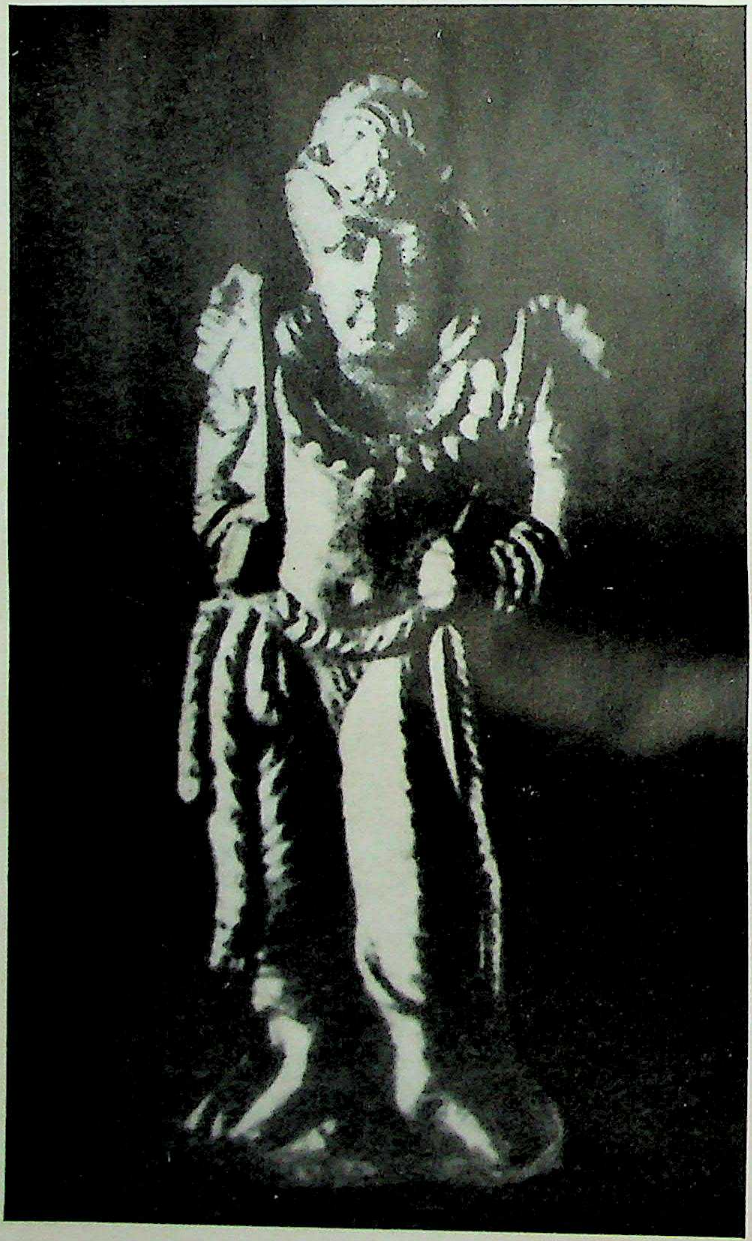
IX Chirand : Structures period III



X Harwan : Diaper-pebble wall



XI Sonkh : An apsidal temple belonging to the Kushana Period



XII Vaishali : Gold Human Figure in Kushana-Mathura style

Agam Kala Prakashan Delhi